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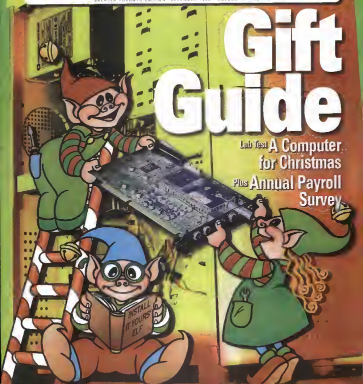

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- Microsoft Windows 98
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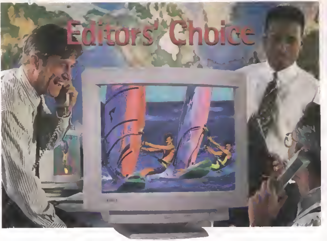

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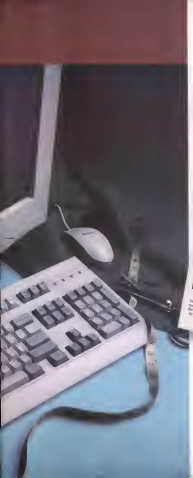

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MiMac

It sits radiating coolness on the corner of my desk, a replacement for my aging and increasingly flaky Performa 5200 Yup, corporate Santa came a little early this year, bearing a new Apple iMac

FROM THE EDITOR

Although we editors have ready access to all the latest computing gear these are loaners for evaluation, and the machines have to go back to the manufacturer within a few weeks. Having a brand-new company-owned computer in the editorial department is a bit unusual for us Normally there's an established pecking order, with the systems department and the graphic and layout artists in production sharing in the newest machines—because they are the ones who benefit most from faster processors, larger monitors, more memory and bigger hard drives. Then the hand-me-down process takes over, and anyone—in editorial, accounting, distribution, administration—who gets a newer machine is generally grateful for even a minor increase in performance

The iMac wouldn't be the best choice for a production machine but I like it a lot as an editorial machine—with a couple of minor caveats For editors and writers, the keyboard and mouse are a bit of a disaster. I use the function and arrow keys a lot as an editor, and both the placement and size of them on the iMac keyboard are less than ideal. There's no delete key just a backspace key The clear key on the numeric keypad works as a delete key in Word but not QuarkXPress Go figure

The round mouse is a case of form before function. The designers could have used the same gorgeous teardrop shape of the computer housing to create a mouse that was attractive but a lot less annoying. As it is, the mouse usually rests with the "up" position somewhere between 11 and 1 o'clock, so when I move the pointer, it skitters off diagonally from the direction I really wanted it to move, and I have to reposition my grasp

These are minor problems, and easily remedied by buying new attachments Since the iMac supports universal serial bus, any USB mouse or keyboard should work

A more generalized problem is that there appears to be no way to reset the machine if it freezes (yes Macs do freeze, crash, etc.) except to physically pull the power cord out I'm told there is an iMac II coming that will incorporate a reset switch in the Power On button so this may be a temporary issue.

Despite these ergonomic annoyances, I'm generally pleased with the machine. The iMac is significantly faster than the machine it replaced (In PC terms it feels like moving from a 486 with 8 MB of RAM to a 233 MHz Pentium with 32 MB of RAM.) Applications load and respond much more quickly, and I can have more of them open at the same time.

Some critics have suggested that the built-in 15-inch monitor is too small, especially in light of the fact that 17 inch monitors are becoming the norm, particularly on PCs This is the main reason I don't think the iMac is the best choice for a graphics workstation But for anyone who doesn't need a big screen, the iMac is fine I've stared at that screen eight hours a day for days at a time without suffering the eyeball burn that occurs when you look at a cheap monitor hooked to a cheap graphics card

The iMac takes up very little desk space Considering that the desks or workstations of reporters and editors tend to be cluttered with news releases notepads and other tools of the trade this can be a minor but useful characteristic (and one that would be relevant to anyone with a small work space)

iMac (counter) culture

Of course I'm saving my favorite feature for last—it's the way the iMac looks I have a rather serious- and corporate-looking office with a big oak desk that's stained to resemble cherry or some exotic endangered wood I like the fact that with the iMac perched on the corner of the desk, it's harder to take that office too seriously

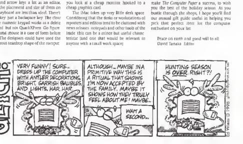
However the Apple designers' 60s counterculture-inspired sensibility for things far out and cool might be shutting the iMac out of an important and lucrative niche—the executive workstation market As I look at the aquamarine and translucent machine sitting on that oxblood colored desk I realize that the reasons I like it are the same reasons why a corporate executive wouldn't. The iMac looks like a toy or a plaything, not a serious business tool Having an iMac on your desk is like wearing a Hawaiian shirt to a suits-only board meeting, or parking your new Beetle next to the other vice-president's Lexus

Yet the solution is relatively simple, in this era of any-color-you-want plastics Memo to Steve take that charcoal black you used for the NeXT, have the manufacturer run off a batch of 10 000 or so iMac cases in the new color If they can work in a thin pinstripe pattern, all the better. Rebadge the resulting product as the iMac EX (for executive) Use tasteful gold script for the lettering, of course

Seasons greetings

I would like to take this opportunity, on behalf of everyone who works so hard to make *The Computer Paper* a success, to wish you the best of the holiday season As you bustle through the shops, I hope you'll find our annual gift guide useful in helping you pick that perfect item for the computer enthusiast on your list

Peace on earth and good will to all
David Tanaka Editor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Get a real benchmark, reader says

I would like to comment on Graeme Bennett's article about the ATI Rage 128 in November's *The Computer Paper*. I do not agree with the use of ZDNet's 3D Winbench as a benchmark for 3D video cards. If you've been to Tom's Hardware page recently you would have noticed his article against the use of it (http://www.tomshardware.com/3Dhype98.html).

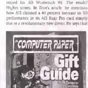
The reason is that many graphics chip manufacturers (including ATI) have been suspected of tweaking their drivers to be optimized for 3D Winbench 98. The result? Higher scores. In Tom's article he mentions how ATI claimed a 40 percent increase in 3D performance in its ATI Rage Pro card simply due to a revolutionary new driver. He says that testing with 3D Winbench 98 truly did result in a much higher score but "the frame rates of [his] games benchmark suite were either untouched or they even went down by 25 percent in the game Incoming." He goes on to say "What is this supposed to mean? The new driver scores better in 3D Winbench 98, but in real world applications it's either the same or even worse?"

If you keep up to date with the 3D video card scene on the Internet, you'll know that *nobody* uses 3D Winbench for benchmarking, especially after Tom Pabst wrote that article. His point was very much a valid one: Do we play 3D Winbench 98? No. We play games. So we should use "real world" applications to benchmark video cards like games.

Just in case you're wondering, I'm not a disgruntled ATI ex-employee. I'm just somebody who stays in touch with the 3D graphics market and wanted to clear some things up.

Moses Wang

Graeme Bennett replies: I don't disagree, but those were the only numbers I had, and they're better than nothing. We'll publish further tests (with, as you put it, "real numbers") as soon as ATI sends us a card, which is now delayed until December.



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Network glitch

Issie Rabinovitch did a good job with the article "The case for Fast Ethernet" (*TCP*, November issue). However, there's one error. Regarding 10Base-2 Ethernet, Rabinovitch says "...or a single NIC fails, the entire network grinds to a halt."

This is true only if a NIC fails in such a way that it jabbers or makes other transmission errors. If the card fails in any other way—for example, it can transmit but not receive—its presence on the network has no effect.

Claude Morin, Mississauga, Ont.

Not fade away

Your paper has had a number of articles and tests on digital cameras and printers. I see three factors that must be considered before digital can compete with film: permanence, quality and cost. Everything I read deals with only the last two. The quality is getting better due to better inkjet printers and special paper. The cost of printers has dropped although the ink cartridges are still expensive. The permanence issue has never really been addressed. In spite of what we may like to believe, most photographs are taken as permanent records, not for temporary presentations or Web pictures.

Education offers a vast market for classroom publishing that is under 15 cents per page, with quality, permanent, black and white or color pictures. If a kindergarten teacher sent home a small booklet within the first month of school containing each child's picture and a quote from them on their first impressions of school, mothers would cry. Then they would tuck the book away to be part of a future wedding reception. The thought of the picture being ruined by tears or moist fingers turning pages changes everything.

Please study the problem and show me the quality, cost and permanence.

Warren Smallwood, Rivers, Man.

David Tanaka replies: In our November issue, an article written by Jacques Surveyer called "Buying your first digital camera" (also available on TCP's Web site at http://www.tcp.ca) outlines four risks of digital photography. One of those is the same one you raise: image permanence.

I spoke with people at Lexmark earlier this year and was told that until the printer industry can perfect a pigment-based inkjet ink (color inkjet inks are currently dye-based), the issue of image permanence won't fade away.

On a separate occasion, I spoke briefly with a chemist working with a company that supplied fade-resistant inks for commercial uses. The company's main market was sign and graphics shops that used wide-carriage inkjet printers to make signs, posters and banners. Since this signage would be used in store windows, they could be exposed to direct sunlight. The company's inks were formulated to be fade resistant, although the chemist was very careful to point out the big difference between being fade resistant and fade proof. It seems that many in the industry are aware of the problem, and are working on it, but so far, no one has a solution.

Where's the review

I enjoyed your article on megapixel cameras in the November issue. However, I was interested in your take on the Sony Digital Mavica MVC-FD71. It was included in your table of lab test results but you did not discuss it.

Paul Reid

DT replies: The Sony you refer to was discussed in a separate article entitled "Low res cams offer value." This may not have appeared in all editions, but can be found on TCP's Web site (http://www.tcp.ca).

Didn't like removable storage story

Regarding the article "Taking your data offline" in the October issue, I was disappointed at what the article didn't say:

1. Avatar, the maker of the Shark drive has

Continued on page 12

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Continued from page **10**

ceased operations. Even though some stores still have some stock, good luck getting disks and current drivers, let alone support, as time goes on.

2. I was surprised that there was no reference to the Zip drive "click of death" controversy. Regardless of what you believe the scope of the problem to be, I believe it at least deserves a mention. The jury is still out on the reliability of this drive.
3. As for the SparQ, I have personal experience with just how unreliable this drive is—I am on my fourth unit, as the first three failed. If you check out the alt.syquest newsgroup, you will see that my experience is far from unique. Also, it appears that there is a good chance that Syquest will be in the same boat as Avatar in the very near future. I wish the author had done a bit more digging before calling the SparQ a "better choice."

John Meadows

Rod Lamirand replies: It is true Avatar has unfortunately gone out of business even though they had an excellent product that received good press. It is still unclear at this time if anyone will try to carry the product forward.

And yes, the "click of death" (COD) issue is important to consumers. Iomega has recently announced it is willing to consider replacing or repairing Zip drives, even those no longer under warranty, on an individual basis in response to what has been called the click of death.

It is my understanding that COD is a term being used to describe a number of different scenarios that result in the read heads seeking the cartridge's initial track. The cause itself is only an indication that the drive can't find the disk's zero track.

In Canada, an Iomega spokesperson says that, "If a customer hears an abnormal, repetitive clicking noise, Iomega technical service can walk the customer through a diagnostic process to determine if the clicking noise is associated with a functioning problem." As well, Iomega has a service depot in Canada (Adtech) that honours the Zip warranty and has, "when necessary and appropriate," replaced out-of-warranty drives.

The best place to read more about the COD and even download a free utility that will test your Zip or Jaz drive is the Unofficial Click of Death Homepage (http://www.thirdwayxp.com).

Regarding your comments about SyQuest, yes, it has had a serious run on its stock and could ultimately fail although the company is doing well with its iMac SparQ USB and other products. This doesn't alter the fact that the peripheral is excellent and becoming widely supported. I visited the newsgroup you mentioned and others and find no more complaints than with any other removable storage device. The SparQ has been and continues to be lauded by practically every technology writer around.

And speaking of the SparQ

I was disappointed in the way Rod Lamirand so easily glossed over the virtues of Syquest's SparQ drive in the October 1998 "Taking your data offline" piece.

His comment suggesting that it be included in "high side of the price scale" category is a disservice to your readers. The figure used in the article for the cost of the drive was $300. One ad in the same issue offers it for $255. I bought my internal EIDE version at the April Computer Fest for even less than that. The 1 GB cartridges can be had for as low as $42. The cost per MB here is an incredible $0.04.

I think these numbers compare quite favourably to the $450-$800 quoted for CD recorders or the drive and media costs for Sharks, Zips, SuperDisks, HIFDs, Syjets, DynaMOs, Jaz, Orbs, tapes or whatever else is out there now. As for performance, wow. Average seek time is 12 ms and the maximum data transfer rate is 6.9 MBps. Aside from the limitless storage, applications run as fast off the SparQ drive as the computer's hard drive.

It might sound like I'm very pleased with my SparQ drive. Well, Rod was right about one thing: big, fast and removable is where all the excitement is.

Matthew Rapus

Great advice

I just caught the CBC show with Graeme Bennett and wanted to give him a congratulations on his demeanor and advice. (*Editor's note: Graeme is a regular guest on the CBC AM noon to 2 p.m. program in the Vancouver listening area.*) I have been working in computers since 1968 and have been in the technical end for the past 12 years and I think this man is great for the industry as a whole. I don't sell systems but do advise some folks as to what might suit their needs and I would and will recommend *TCP* as a great place to get advice. Thanks again.

Shayne Smith

Wedding app adapted from flight sim

TOKYO (NB)—Proving that planning a wedding just keeps getting more complicated, NEC Corp. has announced a new simulation system that allows couples to choose the decor themes for their weddings and receptions. The system was developed by NEC Aerospace Systems Ltd. and uses the same technology employed in flight simulators.

Unlike commercial simulation systems the company normally sells, the virtual wedding system employs a conventional PC, albeit with 128 MB of memory, and is designed to be easily operated.

Using the system, couples can select color schemes, decor and table layouts, view 3D graphics of the hall from different angles, see detailed graphics of selected themes and more.

The computer system will even display estimated costs in real time, as data and selections are changed, and is designed to work together with NEC Aerospace Systems' virtual dressing room software, which allows prospective grooms and brides to see themselves in a variety of wedding outfits.

Trials of the system are already under way at Chinzanso, a Tokyo Banquet Hall and Garden Restaurant, said NEC. The system will be available to wedding and banquet halls in Japan before the end of February 1999. ☐

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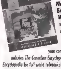

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Microsoft introduces smart phone

By Geof Wheelwright

Let's see now. Microsoft has so far made a bid to include software in your computer, your children's toys (with its Actimates range), your car (with the AutoPC developed in conjunction with Clarion) your watch (the product it developed in conjunction with Timex) and on your television (with WebTV). What's next?

Microsoft Cordless Phone System
From: Microsoft Canada
http://www.microsoft.com
Suggested retail price: $289

Turns out it's the humble telephone. At the beginning of October Microsoft Canada announced the introduction of the company's first telephone: the $289 Microsoft Cordless Phone System. It's a 900 MHz phone that hooks up to your PC and uses Caller ID technology to your handle calls and phone messages.

And, not surprisingly, PC-based software is what Microsoft uses to do this. The software creates what Microsoft calls an Enhanced Caller ID system that lets you create "personalized greetings for different callers and block unwanted callers, while letting high-priority callers ring through." In addition, it includes a Caller ID Announce feature that lets you hear who's calling through the handset speaker before you pick up the phone.

Well, you may already have all that just by virtue of having a Caller ID box on your telephone line, a good memory for numbers and a basic answering machine. So Microsoft has strengthened its proposition with something it calls Call Manager Voice Command. No prizes for guessing what this does—it lets you place calls and check messages by speaking simple commands into the cordless handset.

Merely saying, "call Hughie," will immediately put you through to the number that you have previously stored as Hughie's number. One thing to note here is Microsoft's claim that the voice-recognition technology used in its Cordless Phone System can correctly recognize voices from different users without "training" the system's voice-command functions. This kind of claim has come back to haunt many a manufacturer of handwriting recognition and voice recognition products.

One of the voice commands included with the phone, for example, is "delete message," something that you would not want to have confused with a phrase that you might say to a colleague (such as "did you hear that message"). No one is suggesting this Microsoft product will suffer any such problems, but it is an issue that will undoubtedly come to light quickly if they exist.

A feature that seems to be immediately quite useful is the Call Manager's voice mail system, which allows you to create individual voice mailboxes for family members, business calls and any other group of individuals you specify, as well as store thousands of messages on your hard disk. Messages can be retrieved via the Microsoft handset or from any outside phone. The software also automatically logs all incoming and outgoing calls on the PC.

> To use the Microsoft Cordless Phone System software, you'll need a PC with at least a 90 MHz Pentium CPU running Windows 95 or 98

The Microsoft Cordless Phone System includes a 40-channel, 900 MHz cordless handset, a charging cradle that can be placed anywhere in the home and a base station that connects to the phone line and the PC serial port. The unit also features a hold button, a redial button, volume control, an out-of-range alert and a low-battery warning.

To use the Microsoft Cordless Phone System software, you'll need a PC with at least a 90 MHz Pentium CPU running Windows 95 or 98. The PC must have an available serial port, 16 MB of available RAM (32 MB recommended), 30 MB to 100 MB of hard disk space, a CD-ROM drive, a 256-color monitor and adapter, and a 16-bit Windows-compatible sound card with a microphone and speakers or headphones.

To use Voice Command, Caller ID or voice messaging, the PC must be turned on and be running the Call Manager software. To use Caller ID features, the user must subscribe to Caller ID service from their local telephone company. ❑

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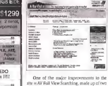
AltaVista naturally upgraded

HOUSTON Texas (NB)—Using the improved AltaVista search engine can be as easy as asking a question, according to Compaq Computer Corp.

The Internet portal site's new natural language processing (NLP) technology highlights several improvements the computer giant has made to the search engine site it recently acquired as a part of a US$9-billion buyout of Digital Equipment Corp.



One of the major improvements to the site is AV Full View Searching, made up of two current and one new search techniques.

The new Ask AltaVista lets users search the Web by asking natural language questions. The site then checks the question with the six million questions already on file to provide a single answer. AltaVista research editors have already searched the Internet to hand-pick Web sites that best answer users' most popular questions, Francis said.

Compaq had already used index search and directory search for AltaVista. Both of those techniques are included in AV Full View Searching.

Family surfing is easier now through AltaVista Family Filter, which uses technology from Spyglass Inc.'s SurfWatch Software division. AltaVista Family Filter screens out objectionable material such as pornography and hate or violence-related materials.

AV Family Filter first checks to see if the page belongs to an objectionable category, then reviews information on the page with SurfWatch technology. AltaVista also incorporates editorial filtering, giving users the power to help identify potentially objectionable pages which they can submit to AltaVista for review.

A new feature exclusive to AltaVista is the AV Photo Finder, which can search some 10 million pictures and images on the Web. With AV Photo Finder, users type a request and results are immediately delivered as thumbnail sketches ranked by relevance. Web surfers can then link to the Web page where the image is located, or just to the image.

The new AltaVista guide also has a simpler address, http://www.altavista.com, after Compaq settled a two-year legal battle with the previously known AltaVista Technology Inc. over the trademark and Web address. The new address for the search engine is now in operation at http://www.av.com ❑

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P-300AMD K6-2 3D Now $837
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Intel i740 (fw 3D hw eng ne) 8mb AGP
Wave 32 sound & 80w speakers
-36x cdrom & 1.44mb 3.5 floppy
15" .28dp UVGA (1280x1024) mtr
-NetLink 56k V90 PCI VFX modem
Enh Windows kybd & Mouse
-Mini Office Suite or 500 title art pak
Win 98 installed with CD/manual
PentII-266c (0k) $1347
PentII-333a (128k) $1481
PentII-350 (512k) $1649 or 61/m
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Wave 32 sound & 80w speakers
36x cdrom & 1.44mb 3.5 floppy
17" .28dp UVGA (1280x1024) mtr
NetLink 56k V90 PCI VFX modem
Enh Windows kybd & Mouse
Mini Office Suite or 500 title art pak
Win 98 installed with CD/manual
PentII-266c (0k) $1562 or 66/m
PentII-333a (128k) $1949 or 63/m
PentII-350 (512k) $1864 or 66/m
PentII-400 (512k) $2188 or 78/m
PentII-450 (512k) $2478 or 91/m
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Intel i740 or ATI Xpert98 8mb agp card
SBI 28 Awe PCI & 80w speakers
36x cdrom & 1.44mb 3.5 floppy
View/Op V73 .28dp or Iview 17" .28dp
USR 56k V90 VFX Winmodem
Enh Windows kybd & Mouse
Mini Office Suite or 500 title art pak
Win 98 installed with CD/manual
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-8.4gb fast ultra ATA hdd, 2X USB
Matrox Millenium (fastest) 8mb agp
SB128 Awe PCI & 80w speakers
36x cdrom & 1.44mb 3.5 floppy
Viewsonic/Op V73 .28dp 17" svga mtr
USR 56k V90 VFX Sportster (not Win)
-Enh Windows kybd & Mouse
-Mini Office Suite or 500 title art pak
Win 98 installed with CD/manual
PentII-266c (0k) $2068 or 76/m
PentII-333a (128k) $2177 or 81/m
PentII-350 (512k) $2345 or 87/m
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2X Pcmcia slots 1S 1P ports
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Enh Win kybd & Trckpd
Ac pwr/charger NiMh battery & case
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AMD P-233mmx $1895 or 76/m
AMD P-266 K6-2 $1920 or 71/m
AMD P-300 K6-2 $1949 or 73/m
This is our second best model, it has a dual scan color display but can be upgraded to the better quality active matrix display for only [illegible] The better active display with 30ms is the [illegible] configuration

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TX430 chipset with 512k cache
32mb ram expandable to 128mb
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1mb ESS sound with spkrs & mic
30X cd & 1.44mb floppy co-resident
2X Pcmcia slots, 1S 1P 1USB port
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Ac pwr/charger NiMh battery & case
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Intel P-233mmx $2068 or 75/m
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Upg to 13.1" Active $100
[illegible]

ULTINET 1100 NOTEBOOK (NEW)

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1mb ESS sound with spkrs & mic
24X cd & 1.44mb floppy co-resident
2X Pcmcia slots 1S 1P USB port
13"/14 Active Matrix 1024x768 lcd
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-Enh Win kybd & Trckpd
Ac pwr/charger NiMh battery & case
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AMD P-300 K6-2 $2280 or $85/m
Amd P-300 K6-2 $[illegible] or $106/m
Intel PII-233 $3174 or $117/m
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24X cdrom & 1.4mb floppy [illegible]
-2X Pcmcia slots 1S, 1P 1USB ports
15.1" Active Matrix 1024x768 display
Enh Win kybd, Trckpd
-Ac pwr/charger LiOn battery & case
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PII-266 $4227 or 156/m
PII-266 $4612 or 171/m
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SBI 28 PCI & 80w speakers
-Sony/Tosh 3X DVD 8MB Voodoo II
Intel/Iview .25dp 17" 1600x1200 mtr
USR Sportster V90 ufx modem
-Enh Windows kybrd & Mouse
-Mini Office Suite or 500 title art pak
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PentII-266c (0k) $2475 or 92/m
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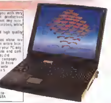

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The 1998 holiday buyer's guide

Family, finances, fitness and fun

In the home computing market, as in all consumer markets, the season leading up to Christmas is the biggest buying and selling period of the year. Computer hardware and software developers gear up to launch new products in time for the season. Retailers advertise their specials, merchandise their product lines in fancy store displays, and increasingly go onto the Web to market or sell.

We consumers check the products and prices in the ads in this publication and elsewhere, and look for the biggest bang for the budget. As the clock ticks down to Dec. 25, the question of what gifts to choose for friends, family and yourself looms large on millions of Canadians' to-do lists. No matter what our religious beliefs, and no matter whether or not we personally find the materialistic mania of the holiday season exciting or excruciatingly obnoxious, it's hard to escape it.

Here at *The Computer Paper*, the December issue is both a challenge and an opportunity. The challenge lies in trying to help our readers find out what is most benign, enjoyable and affordable in the flood of high tech products and services. The opportunity, as we look up from the trenches of the "feeds and speeds" obsession with things faster or higher capacity and lower cost, is to consider aspects of computing that may make life more sociable, enlightened, creative and enjoyable.

This issue's Holiday Gift Guide aims to present a sampling of the best of the season's offerings in computer hardware, software, books, online services, and related products. Even if you have no intention of buying a tech product or service this holiday season, it should be a fun window shopping expedition.

Some assembly required?

One of the principal factors determining what got into our guide this year was overall usability. A big part of that, in our testing, was the "out-of-the-box" experience. How quickly can one get to the fun, or the productive part of a hardware or software product, and how little hassle does one have to go through to get there?

In many of our families, there is almost always a quiet period during the holidays, when everyone just relaxes, and amongst other things, tinkers with the presents they received. Almost inevitably, a computer-related product requires some attention, whether it is hours spent learning a new game, or installing an internal graphics card or modem, or getting an external printer or scanner to work.

The Windows/Intel (Wintel) PC is still nowhere as simple as it should be, and products that have been well engineered to overcome the inherent flakiness of the Wintel platform earned special attention in our guide.

This year we've also put an emphasis on affordability. Most of the software products and online services listed here fall in the $20 to $70 range, while most of the hardware products are in the $100 to $400 range.

—*Jeff Evans*

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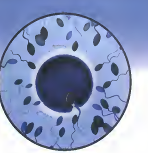

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*Nov 5/98 Issue Now Magazine

Computer-aided fitness: A personal testimonial

It could be argued that the sheer amount of time spent sitting and staring at a computer screen—to the extent that it displaces physical exercise, reading and interacting with loved ones—is potentially a serious danger to one's quality of life.

However, this writer has found that it is actually possible to morph that sloth-inducing pile of metal and plastic on the computer desk into a fitness-control centre and to morph the slothful PC user into a more active healthier computerist. I was given a CD-ROM title called Active Trainer by LaserMedia (http://www.lasermedia.com/trainer) to review several months ago. I installed the program on a 200 MHz Pentium PC running Windows 95 and checked out its basic features.

The Active Trainer program is nicely laid out with a logical step-by-step approach to assessing your fitness level and designing a program "to lose weight, build muscle, or improve general health." I'll admit I was intimidated by the friendly, sleek buff athletes who appear in the onscreen videos giving demonstrations, advice and encouragement. I didn't actually begin using Active Trainer seriously until several months later.

After stepping on the bathroom scales one beautiful June morning, I decided to see if this product could actually help me get back into shape. Over my 15-year history in the computer industry I had consistently gained about six pounds a year due to a combination of a lack of exercise and poor eating habits. (I was addicted to the Four Fast Food Groups: grease, sugar, salt and chocolate.)

So I got with the program, doing the video-guided fitness test that is the first stage of the Active Trainer program. I learned to measure my own pulse and to use the (included) tape measure and fat calipers, and set up my own customized nutrition and exercise program on the computer. Active Trainer is very helpful in all these activities, with an included feature for printing out monthly and weekly schedules.

I don't have any exercise equipment nor do I belong to a gym, so I settled for a program of better nutrition following the Active Trainer suggestions (this must be the only piece of software that comes with a virtual cafeteria, plus a stretching area, aerobics studio and weight room). I eventually settled on a combination of healthier meal planning coupled with lots of walking and aerobic and stretching exercises.

Over the next four months I lost 47 pounds and took seven inches off my waistline. For the first time in years I can climb stairs and run without puffing. I still have about 40 pounds to lose, which I expect will take another six months or so (that last 10 pounds are said to be the toughest).

I intend to move on to a second title in the Active Trainer series, the Active Body Plan program from Laser Media, to work on improving my abdominal muscles and to begin to improve my upper body strength.

Much of the progress I've made so far is directly attributable to the Active Trainer program. To be honest, though, my progress is also due to a variety of personal factors. I have to thank my family for their continual encouragement and positive reinforcement throughout the process.

As well, Scarlett, the family dog, has been my endlessly available walking companion. She makes sure I don't miss my daily morning and evening walks, even when I'm feeling lazy and the weather is lousy.

So there you have it: fitness synergy consisting of the Active Trainer software program, a Pentium 200 MHz PC, a laser printer for printing my schedules, love and encouragement from my family and a tireless pooch for a companion equals a fitter lifestyle.

I still have a fairly serious substance abuse problem with chocolate, but we won't go into that.

Jeff Evans

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Techno "toys"

Toy makers and software developers have teamed together to produce two unbelievably great techno/computer toys for kids this holiday season

By Joan Allen Ikeson

Barbie Photo Designer with Digital Camera and the Lego Technics robotics system with external sensors and a RCX programmable controller are of superior quality and their technology is beyond even the high end of kids toys. While they are to be played with, calling them "toys" is an understatement

You need deep pockets for both of these items yet they are bargains considering their sophistication. I put my 12-year-old to bed at 11 p.m still trembling with excitement after three hours of studying building and testing his first "robot." The 11 year-old girl and her mother who tested the Barbie Digital Camera were equally pleased with its technical quality and fun value

Barbie Photo Designer
Digital Camera & CD-ROM
From: Mattel Media
Tel: 888-633-4211 http://www.mattelmedia.com
For Windows 95
System requirements: PC with 90 MHz Pentium CPU serial port (9-pin cable included: 25-pin adapter required for PCs with a 25-pin serial port) color printer recommended, minimum of a Pentium 90
List price: $89.99

The Barbie Photo Designer comes with a real digital camera that will store up to six pictures at a time It can also be used connected to a computer, which allows users to take 20 shots before having to decide which ones are keepers Pictures may be taken indoors or out and no flash is necessary In this respect it performs exactly as advertised To view the photos simply connect the camera to your computer via the supplied serial cable and download pictures

Children are drawn to cameras but parents often avoid giving them to children because of the cost of film and developing With a digital camera, both parents and children are satisfied—there are no film and developing costs, and the pics are viewable immediately which really appeals to kids

Younger girls aged six to 10 who are Barbie fans will enjoy being able to use their photos with Barbie crafts They can create Barbie postcards, a personalized scrapbook or develop an animated Barbie movie using their photo subjects A real benefit is that it encourages girls to view the computer as a tool that they can manipulate with other objects such as cameras to create fun activities and projects

The downside of this exciting tool is its limited target market Where is the camera for boys? What about girls who have grown a little

1.5 million pixels (actual size).

Now put your eyeballs back in.

The Fuji MX 700 Can you believe something this compact can deliver the high quality imagery of 1.5 million pixels, easily merge images of brilliant quality into documents, presentations, webpages, or the Internet, and still cost under $1000? Seeing is believing. Call Fuji at 1-800-461-7380 for more information.

digital

FUJIFILM
Simply More Advanced

too old for Barbie as the 11-year-old tester has? She loved the camera and how it worked but didn't want to be associated with what she perceived as a younger girls toy

As well, the resolution of images taken with the camera is fairly mediocre compared to other digital cameras (what do you expect for $99)

The on-screen controls are all icons so girls in the six to seven year age group won't need special reading skills to get the most out of their camera However learning what the symbols mean does take some time Parents should expect to spend some time with their children helping them learn how to use the camera and software

There are some additional bonuses with this package The camera comes with a timer so girls can set up the camera to take pictures of themselves And just like "adult" imaging software, Barbie Photo Designer allows girls to play with special effects and filters Photos can be printed on color inkjet or laser printers

Parents may also preselect the amount of space reserved on the PC for pictures so the entire hard drive will not be filled with the creations of your budding Annie Liebowitz

The software includes an excellent help function with suggestions by Barbie on taking pictures Altogether a rather fun and inexpensive introduction to picture taking and using the computer as a creative tool

LEGO Mindstorms Robotic Invention System

From LEGO Co
Tel 800-287 5346 http://www.legomindstorms.com
For Windows 95
System requirements. PC with 90 MHz Pentium CPU 9 pin serial port 9-volt and AA batteries
List price $259 $75 (expansion sets)

LEGO Mindstorms Robotic Invention System is the ultimate awesome advanced LEGO Technics-type set for kids 12 years of age and older Included with the 727 Technic parts is an RCX microcomputer that is the core of robots designed with the kit

With the included CD-ROM you can program how you want the robot to respond to its environment and communicate with it via an infrared transmitter connected to your computer's serial port

The robots designed will be unique creations because, unlike LEGO for younger kids there are no set instructions for particular design Instead, there is a supply of LEGO pieces two motors two motion sensors, a light sensor gears and the Constructopedia building guide

According to LEGO president Kjeld Kirk Kristiansen, "The philosophy behind LEGO Mindstorms is to allow children not only to understand technology but also to become creative masters of it"

The CD ROM however does have Interactive Training Missions and Challenges that provide detailed interactive instructions on how to set up the RCX, infrared transmitter and sensors The RCX has some built-in intelligence—that is, it "learns" from its interaction with the environment and encourages teens to perfect their original design and program by trial and error Wow!

This "toy" has more on par with robotics design challenges in high school and university but is structured enough for middle school kids Suddenly the $259 price tag becomes reasonable for the level of technology and value in hands-on training for future engineers, programmers and designers

In fact Mindstorms was developed by LEGO over 10 years with Massachusetts Institute of Technology (MIT) whose world renowned Media Lab (http://www.media.mit.edu/) conducts advanced research into a broad range of information technologies including artificial intelligence [illegible] design and education related [illegible]ologies

FIRST (http://ww[illegible].org), a non-profit robotics competition in the U.S. that attracts entries from hundreds of high schools, is sponsoring a competition for middle school kids using Mindstorms as the basic components.

So what can kids do with their robot? They can create everything from a light-sensitive intruder alarm to a robotic rover that can follow a trail, avoid obstacles or even pick up a can.

LEGO is also releasing two expansion sets. RoboSports which will allow kids to create robots that can shoot hoops flick pucks, and dart through an obstacle course and Extreme Creatures which will provide the parts to build "animals" whose movements and behavior mimics those of nearly any member of the animal kingdom. The original sets are required to use the expansion sets

LEGO has also created a Web site just for kids to share their Mindstorm ideas, which includes Web page design chat rooms, message boards and on line tutorials ❑

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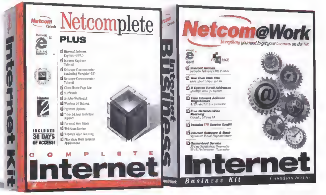

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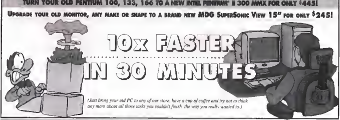

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Sony embraces convergence

By Jeff Evans

Sony is a name most people are familiar with but not necessarily in connection with computers. They are probably more familiar with this pioneering technology manufacturer for its premium products in professional and consumer video and audio markets, and in name brand consumer electronics.

Sony invented the first portable transistor radio, the first portable video tape camera system, the first videocassette player, the Walkman portable cassette tape player and the first commercial compact disc player. Sony has been an innovator in product design and miniaturization of consumer electronics.

In the computer field, Sony is known for components and peripherals: the Trinitron cathode ray tube (CRT) and monitor lines, digital cameras (including the Mavica models which use floppy disks for storage), CD-ROM, floppy and mass storage drives, and digital media supplies.

Although Sony has a long history as a PC vendor in Asian markets, it has only recently been linked with consumer PCs in North America. In Canada, its high-end video audio integrated operation (VAIO) line of consumer PCs was expanded in July to include notebooks.

Why jump into a dogfight?

Many observers wonder why Sony, at such a late date, would jump into the notoriously ruthless, low-margin consumer PC market. After all, competition has become fiercer than ever recently, as prices for entry level PCs plunge under $1,000. Only a handful of companies—Compaq, IBM, Dell, NEC/Packard Bell and Toshiba—account for about 60 per cent of the entire market.

Why doesn't Sony just stick to selling monitors, drives, cameras, and other, more profitable parts of the computing puzzle? The answer is Sony believes it has something unique to offer as video, audio, telecom and computers move to a common digital format—a process known as convergence.

The mother of all miniaturization

Founded in the economic ruins of post war Japan in 1946, the company that became Sony displayed a strong interest early on in commercializing the latest technologies in the form of high-quality, leading-edge electronics products. Sony's original team of technicians adapted magnetic tape technology (acquired during the Second World War from Imperial Japan's technology partner, the Third Reich) into Japan's first magnetic tape recording system.

Soon after the invention in America of the exotic new transistor, Sony paid cash for the Japanese license and created a high quality transistor radio. Sony thereby created a whole new market for portable consumer electronics products. At the same time, Sony showed Japan the way for a new peaceful role in the postwar world as an economic samurai, conquering world markets with quality and creativity.

Sony's goal for the 21st century is to create not just components but solutions for the converged digital world it foresees. On a recent tour of Sony's Media World demonstration facility and its advanced research lab, I saw not only the latest computer products but next year's products in development, and radical new technologies struggling to be born.

Sony has pioneered the integration of digital video with PCs, and intends to leverage its multimedia expertise in the computer arena. Seen in this light, the VAIO experiment makes a lot more sense. For anyone interested in the best in audio, video, mass data storage, digital photography, miniaturization, and usability, Sony is the farthest thing from a copycat no-name brand. ❑

Cinemazine

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WHAT'S NEW

Photo Station edits images via TV

TOKYO (NB)—Canon Inc.'s new digital photo editing unit, the Digital Photo Station PA 200, allows users to edit, store and print digital images using a conventional television set as a monitor. The new system eliminates the need for a personal computer and opens up the digital camera market to any consumer.

It supports both Compact Flash and Smart Media memory cards and can also accept images from floppy disks and RS-232C compatible cameras. The CIFF and EXIF memory formats are also supported.

Users can create an album file and edit images taken with digital cameras and, once the images have been organized and manipulated, they can be stored on a 120 MB SuperDisk. Images can also be printed out when a compatible Canon inkjet printer is connected.

Canon said functions include 90-degree image rotation, image enlargement and reduction, sepia and monochrome photo retouching, color adjustments, effects including oil paint and watercolor, illustrated photo-frame overlays and text input.

The entire unit can also be operated by remote control and with an optional infrared wireless keyboard. The unit will be released in Japan in mid-November. International release dates have not been announced.

Canon http://www.canon.com

Tektronix rolls out four color printers

Calling it a "defining moment for us in workgroup printing," Pat O'Brien, Tektronix's vice-president of color printers for the Americas, introduced the company's new line of color printers in mid-October.

O'Brien said research has indicated that 85 percent of monochrome printer buyers say they'll move to color printers within five years. However, the biggest barrier to switching is the cost of color printers. O'Brien said customers also want color printers that are faster, higher resolution and able to print on tabloid size (11x17 in.) paper. They also want better economy, in terms of lower cost per page or the ability to conveniently print on both sides of a sheet.

The Wilsonville, Oregon based company developed four new printers to help meet these demands. They range in price from $2,495 to $7,995.

The Phaser 740L is a "color-capable" unit which means that for $2,495 the customer buys a monochrome printer that can be upgraded to color. It is rated at 16 pages per minute (ppm) and offers a resolution of 1,200 dots per inch (dpi). The internal processor runs at 133 MHz, and it comes with PostScript 3 and PCL5, 16 MB of RAM and also has 10Base-T networking built in.

When customers upgrade the 740L to color, they essentially create the Phaser 740 which is also available as a separate model. The $3,495 printer is rated at 5 ppm for color and has a duplex-printing option. Other specs are the same as the 740L.

Tektronix is often associated with solid ink printers, and the Phaser 840 is the company's fourth generation printer in this category. The $4,295 printer is rated at 10 ppm for color and black and white. The company says it has developed a new ink formulation, and claims the 840 has (with the exception of the Phaser 740) the lowest cost per page of any color printer. It also claims the 850 has the fastest time for first page out.

The Phaser 780 will handle up to 13x19 in. paper, allowing for full-tabloid bleeds. The $7,995 printer is aimed mainly at the graphic arts proofing market, with a second market being business users who need large format output (for spreadsheets, for example). Output from the Phaser 780 is about $.50 per page, according the company.

Tektronix was founded in 1947 and presently has 8,000 workers and approximately US$2 billion in annual sales—75 percent of which is from products introduced in last two years. The 15 year-old color printing division accounts for about 35 percent of the company's business. The company also makes video post-production equipment (Tektronix says it has won eight Emmy Awards) and measurement equipment such as oscilloscopes and TV testing tools.—*DT*

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http://www.tek.com/color_printers/

Continued on page **33**

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intel inside celeron

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WHAT'S NEW

Continued from page **36**

New Marble Mouse ambidextrous

FREMONT, Calif (NB)—Logitech has introduced the newest member of its rodent family, the Marble Mouse The firm says the device

combines the best features of a mouse and a trackball and is equally comfortable for right handed and for left-handed users.

"Marble Mouse works with the convenience of a trackball and uses our patented marble optical technology which gives superior precision reduced wear excellent motion and eliminates the need for regular cleaning," a Logitech spokesperson said

Regular mouse users who are ambidextrous can change hands easily with this device which has a trackball marble in the centre and buttons to each side The spokesperson described Marble Mouse as a "comfortable ergonomically designed device" which, when used reduces hand and wrist movement and lowers the potential for repetitive motion stress, a potentially disabling risk associated with use of PCs.

Logitech's patented Marble optical technology senses user hand movements in a manner similar to the way the human eye works and then sends this information to the computer. In Marble devices, a laser-like beam lights up a random pattern of dots printed on the marble's surface so that motion of the ball can be tracked by an optical sensor.

To use Marble Mouse users need an PC running Windows 3 1, 95, 98 or NT and an available PS/2 or serial port (PS/2 to serial port adapter needed for serial port use) It will sell for an estimated street price of US$39 95.

Logitech http://www.logitech com

USB added to V 90 chipset

NEWPORT BEACH, Calif (NB)—Rockwell Semiconductor Systems has zipped ahead to pole position in the modem chip marketplace by adding support for USB (universal serial bus) technology in its range of V 90 chipsets

The move illustrates the growing importance vendors are placing on USB compliance According to Rockwell, the enhanced V 90 chipsets can be used to create retail modem products that plug directly into the increasingly popular and easy-to-access USB port which is now included in the majority of new PCs

Rockwell says that by combining its full featured data/fax/voice chipset with USB's ease of use, OEMs (original equipment manufacturers) will be able to create modems that take advantage of USB's plug-n play flexibility "outside the PC." This will eliminate all the guesswork about which serial port or IRQ (interrupt request) to use.

Unlike a legacy serial modem, Rockwell's USB modem is billed as a bus-powered device that doesn't require an external power supply According to the company by providing a USB modem system, its chipsets not only support V 90 K56flex and all other industry-standard modem modulations, but also include industry-standard voice and fax capabilities

Rockwell says its USB modem chipset family includes support for features such as DSVD (digital simultaneous voice and data), telephone answering machines and speaker phones which are important facilities in the retail modem market

In addition, the firm says its USB modem will also include new telephony features that will further add functionality to the modem and create new applications for it One application would be to add the Rockwell USB modem as a second modem and through the appropriate software bond both modems for a higher transfer rate

Rockwell, http://www rss.rockwell.com

W3C recommends DOM Level 1

MINNEAPOLIS (NB)—The World Wide Web Consortium (W3C) has reportedly released the Document Object Model Level 1 specifica-

Continued on page **56**

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I'm dreaming of a silicon Christmas

It's that time of year again, snow on the ground, icicles hanging from the roof, children both big and small diving into snowbanks, skating and sliding around on the ice, and coming back inside soaked and freezing ...ready to warm themselves while having fun with the family PC

By Sean Carruthers

As with any other field the holiday gift season is a very busy time of year for the computer industry with people buying software add-on gadgets and even complete systems This month our test lab offers a few suggestions for those looking to purchase a complete system to put under the tree on Christmas morning.

In most of our tests we emphasize performance For this month's roundup however we wanted to look each system as a whole instead of just focusing on speed. In that spirit we requested systems aimed at the family including monitor, for $2 500 or less.

The variety of machines in this roundup is interesting. As expected all of the systems we received shipped with a modem and options for getting connected to the Internet All came with a set of speakers. Also as expected there was a variety of processors with Pentium II AMD's K6-2, and the Celeron chips represented—and the G3 in the iMac

What was surprising this time out were the choices made for monitors and optical storage The majority of systems in this roundup came 17 inch monitors instead of the 15 inch models we expected to see Also notable was the split between the more traditional CD-ROM and the newer (and more expensive) DVD-ROM format for optical storage

This is not to say consumers should be wary of systems shipped with a DVD drive quite the opposite. For those unfamiliar with the technology, it's similar to CD-ROM technology but allows more data—up to 17 GB—to be stored on a single disc of the same size

Because of the similarity of the technologies the latest DVD drives are backwards compatible with CDs (this was problematic in some cases with first-generation DVD drives) Even though they add a bit to the cost of the systems DVD drives are a great choice for two reasons They seem to be the optical storage choice of the near future and they won't render all your current CD-ROMs obsolete

The testing

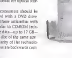
Because the focus of this month's lab was a computer for the whole family we took the emphasis off of pure performance Because of that we have eliminated the usual Editor's Choice award for performance although we still ran the usual benchmark test on the machines. Performance still factored in to the remaining awards although to a much lesser extent than usual.

Benchmarking was done using BAPCo's SysMark32 software with monitor resolution set to 800x600 with a 16-bit color depth The remainder of the testing involved setting up the complete system to see how everything worked together as a whole package

Now on to the systems!

ALC Micro

Model AOpen TBC M350
Street price: $2 499



For this month's test, ALC Micro has sent us an AOpen custom system with a ton of goodies in it

Highlights

- 350 MHz Pentium II processor
- Contains both an 8 MB AGP video card and a 12 MB Voodoo2 card both from AOpen
- The sound card is the recent Sound Blaster 128 PCI card and the Altec Lansing speakers offer excellent reproduction
- Contains DVD for the optical drive and VCD Power Player for DVD movie playback.
- 56Kbps PCI modem.
- Monitor is the 17 inch Aoc 78e which has a great display quality
- System comes with the Logitech wheel mouse and a special microphone headset.
- The software package included is designed to complement the Voodoo2, and has a number of game demos including Flight II JSF, Commander Stratosphere Spec Ops Myth Turok, Tomb Raider 1 and 2, Forsaken and Final Fantasy VII Also included is the AOpen Bonus disc, which has Norton Anti-Virus

Armed with a DVD drive this system is ready for the next wave being able to handle both CD-ROMs and DVDs It is well-suited for full-motion video playback and large-capacity data storage The video and sound components in this system are well-suited to take advantage of the multimedia possibilities DVD allows and are also great for gaming

Software-wise the TBC M350 seems to have too much of an emphasis on gaming to appeal to all families but for the family with older children who love to take on monsters the game pack offers a great sampler that shows off the systems capabilities

Continued on page **38**

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Computrend slashes Intel® Celeron™ processor prices for low end PCs

Computrend is turning up the heat on its Intel Celeron microprocessor with L2 cache pricing for systems that will be offered for as little as US$649

As a part of a price cut scheduled for Monday [Oct. 26th] Computrend is lowering the cost of the 333 MHz and 300 MHz processor with cache.

The move comes as competitors fortifies their position with price cuts that allow their processors to be sold in systems for as little as US$599

The price moves are significant in the newly segmented low end PC market where the Intel Celeron processor has thus far played a marginal position in the upper ranges.

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- 17" SVGA monitor
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[illegible]

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I'm dreaming of a silicon Christmas

*Continued from page **34***

Apple

Model: iMac
Street price: $1 899

Touted as the savior of the Macintosh line, the iMac is certainly an impressive little unit, and may be just the perfect Christmas present for the family that still loves the Mac

Highlights

- It's a Mac!
- Powered by a 233 MHz G3 processor
- It is very compact: the 15-inch display and the computer part are all incorporated into a unit no larger than most 15-inch monitors!
- Setup of the machine is incredibly easy: flip open the door on the side of the unit, attach the keyboard, attach the mouse, attach the power cord to the back of the machine, plug into the wall, and you're done
- The keyboard has a USB port on either side, allowing two additional USB devices to be connected without having to open the side panel. Alternately the mouse can be connected through the keyboard instead of to the side of the computer leaving one of the side panel USB ports free for another device.
- The front of the display has a 4 Mbps infrared port.
- Only one power cord!
- The iMac comes with both a 56Kbps internal modem and a 10/100Base-T Ethernet connector to make the machine Internet-ready both at home and at the office.
- Software bundle includes: AppleWorks (formerly ClarisWorks), FAXstf, Kai's Photo Soap SE, MDK, Quicken Deluxe 98, Williams-Sonoma Guide to Good Cooking, and Internet options.

Even though we can't benchmark Macs with our current software, it's always nice to see Apple products in the test lab, if only to offer an alternative to the PC world. The iMac is definitely a notable difference from the other computers we saw this month: compact, colorful and remarkably easy to set up.

Additionally, the iMac comes with a ton of extra features that make it a truly remarkable machine: an infrared port, built-in modem and 10/100Base-T Internet. When you condense the whole package into a package the size of a traditional 15 inch monitor, it's even more impressive. When all of this is available at a street price of $1 899 including a generous software bundle, it becomes a steal of a deal.

There are a few down sides to the machine, however. Because of its compact all-in-one nature, the iMac has very little room for upgrading inside, other than the RAM. There isn't even a floppy drive inside the machine! Anything to be added to the machine must be done via a USB peripheral device, which could potentially clutter up the desktop. At present, the number of USB devices is fairly limited, but there is a potential explosion around the corner. Because of that, it's hard to say whether going with a USB model for all connected devices is a shrewd move or a miscalculation.

The biggest downside for some will be the aesthetics of the machine. In a row of PC clones, the design of the iMac certainly stands out, with its transparent white and turquoise plastic case. Some are worried that it's a bit too hip for its own good, and won't look quite so hip three years down the road. Apple is likely hoping the design of the iMac will become to computers what the Volkswagen Beetle is to cars. Detractors, on the other hand, may have their vote on it becoming the AMC Pacer of computers. Again, time will tell.

The bottom line for the iMac? For Macheads and beginners, the features, price and simplicity make this a great machine for the whole family for Christmas. People more comfortable in the PC world may not be convinced, but this one will certainly catch their eye.

Compaq

Model: Presario 5050
Suggest retail price: $2,517

Compaq continues to impress with its Presario line. The 5050 is a sleek-looking machine with a number of nice features.

Highlights

- Uses a 333 MHz Celeron processor but with 128KB of Level-2 cache to boost performance
- The keyboard is both multimedia- and Internet enabled, with special keys for speaker and CD control and programmable keys for favorite Internet functions
- The monitor at 15 inches, is smaller than most of the other monitors this month, but has excellent

*Continued on page **42***

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Processor	Pentium II 350 MHz	PowerPC G3 233 MHz	Celeron 333 MHz	Pentium II 350 MHz	AMD K6-2 366 MHz	AMD K6-2 333MHz	Pentium II 300 MHz
RAM	32 MB	32MB	96MB	128 MB	64MB	48 MB	64MB
Cache	512KB	512KB	128KB	512KB	512KB	512KB	512KB
Motherboard	AOpen BX	iMac	Compaq	Asus P2-B	HP	IBM	Asus P2E-M
BIOS	Award	iMac	Compaq	Award	Phoenix	IBM	Award
Operating system	Windows 98	MacOS 8.1	Windows 98	Windows 98	Windows 98	Windows 98	Windows 98
Hard drive	Quantum Fireball EL 5.1 GB	4 GB	8 GB	Western Digital 8.4 GB	Quantum Bigfoot 9.6 GB	6 GB	Seagate Medalist Pro 4.5 GB
Video card	AOpen AGP/ AOpen PA2000 Voodoo2	ATI Rage IIc	ATI 3D Rage LT	Graphics Blaster TNT	SiS 5597/5598	Rage Pro AGP	ATI Xpert98 AGP
Video memory	8 MB/12 MB	2 MB	2 MB	16 MB	2 MB	4 MB	8 MB
CD ROM	2x Panasonic DVD	24x	32x	Creative DVD Encore	24x	32x	32x Panasonic
Sound card	Sound Blaster 128 PCI	iMac	ES1888	Sound Blaster Live!	Crystal	Crystal Audio 4235-KQ	Sound Blaster
Modem	AOpen 56Kbps	56Kbps internal & 10/100Base T Ethernet	56Kbps internal	56Kbps SVC	56Kbps internal	56Kbps internal	56Kbps US Robotics & Intel 10/100 network card
Speakers	Altec Lansing ACS 43	Internal with SRS surround sound	Compaq	Cambridge Soundworks PC Works	Polk Audio	IBM	Cambridge Soundworks PC Works (with subwoofer)
Monitor	17" Acer 78c	15" internal	15" Compaq MV530	17" Azura	17" HP M70	17" IBM	17" Daytek
Mouse	Logitech Wheel Mouse	iMac USB	2-button PS/2	Microsoft 2-button	HP 2 button	2-button PS/2	Microsoft wheel
Keyboard	AOpen Windows	iMac USB	Internet/multimedia	PS/2 Windows	HP Windows	IBM Windows	Microsoft Natural
Software	Vanfod2 demo game pack	AppleWorks, FAXstf Quicken Deluxe 98 Photo Soap SE, MDK Kai's Nanosaur Sonoma Guide	ColorDesk, VideoPhone, MS Works, Quicken 98 MS software pack	Microsoft package DVD software	Microsoft pack, HP pack, Disney's Daily Blast McAfee VirusScan QuickLink III, Quicken	Lotus SmartSuite Norton Anti Virus, PC Doctor	MS Office 97 (small bus. ed.) MS Encarta 99
Extras	headphone/mic headset	IR port	digital flat-panel port				Microsoft Sidewinder gamepad
Benchmark scores							
Desktop publishing	520	N/A	365	382	192	226	242
Desktop graphics	598	N/A	496	814	418	485	517
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Word processing	348	N/A	396	369	203	267	288
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Processor	Celeron 333 MHz	Pentium II 350 MHz	Pentium II 400 MHz	Pentium II 350 MHz	Pentium II 350 MHz	AMD K6-2 300 MHz	Pentium II 450 MHz
RAM	128 MB	64 MB	64 MB	64 MB	64 MB	64 MB	128 MB
Cache	128KB	512KB	512KB	512KB	512KB	512KB	512KB
Motherboard	Tritram P6L40A4	Packard-Bell	Supermicro BX	ABIT 6BX BX	QDI BrilianX 5X	ASUS P5A-B	ASUS P2B
BIOS	Award	Packard-Bell	AMI	Award	Award	Award	Award
Operating system	Windows 98	Windows 98	Windows 98	Windows 98	Windows 98	Windows 98	Windows 98
Hard drive	Quantum Fireball EX 6.4GB	6.4GB	Quantum Fireball EL 5.1GB	Maxtor DiamondMax 7.5GB	Quantum 8.1GB	Fujitsu MP3064AT 6.4GB	Quantum Fireball 8.4GB
Video card	ATI Xpert 98 AGP	Rage IIC AGP	ATI Xpert 98 AGP	Creative Labs 3D Blaster TNT AGP	ATI Xpert 98 AGP	Diamond Stealth 3D 4000 AGP	Matrox Millennium G200 AGP
Video memory	8 MB	4 MB	8 MB	16 MB	8 MB	4 MB	8 MB
CD-ROM	2x Creative Labs DVD	32x Lite-on	32x Mitsumi	32x Panasonic	Panasonic DVD	32x Panasonic	36x Acer
Sound card	Sound Blaster128	Crystal PnP	Pine Aureal 3D PCI	Sound Blaster Live!	Sound Blaster VX	On-board C-Media 3D	Sound Blaster 128 PCI
Modem	56Kbps Supra PCI	56Kbps LT Winmodem	Creative Lucent	56Kbps US Robotics	56Kbps GVC PCI	Diamond SupraMax	56Kbps Netlink
Speakers	Sound Image subwoofer	Packard-Bell 215	Dove	AL ACS-45, subwoofer	MLI 699	MLI-699	ML-691H
Monitor	17" TVM A5SS	17" Packard-Bell 3070	17" Imago	17" CyberQuest Q-71	17" Cybervision C72	17" Preview	17" Cybervision C72
Mouse	Logitech PS/2	Microsoft wheel	Mitsumi 2-key	Logitech Wheel Mouse	2-button	Microsoft 2-button	Mitsumi 2-button
Keyboard	Lite-on Windows	Packard-Bell Windows	Mitsumi Windows	Keytronic Windows	Keytronic	Fujitsu Windows	Mitsumi Windows
Software	18-CD bundle	Microsoft package children's selection, more	Productivity Value Pack	Viper M350 bundle	Microsoft Home Reference, PCCillin Anti Virus	CD Fun Pak	Mini office suite 500 title encyclopedia
Extras	Power bar						8 MB Voodoo2 3DFX card
Benchmark scores							
Desktop publishing	315	288	341	306	340	269	376
Desktop graphics	526	565	690	580	664	545	731
Desktop presentation	356	312	422	356	483	292	467
Word processing	319	293	367	332	363	296	388
Spreadsheet	316	348	488	444	381	367	532
Database	N/A	324	386	342	362	300	467
Sysmark 32	N/A	323	[illegible]	388	365	310	461
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I m dreaming of a silicon Christmas
Continued from page 38

quality a built-in microphone and a detachable speaker set
- In addition to the analog monitor included with the system, there is also a digital flat-panel port on the back for future upgrade to a flat-panel display with a direct connection

- Cables on the back are color-coded making set-up easier
- Has a v.90 56Kbps modem
- Contains a 3D AGP card and Aureal A3D 360 degree sound.
- The front of the machine has the Creativity Action Center—a tilt panel-covered area with a joystick port and two USB ports. Putting these up front makes it easier and quicker to connect devices.
- Software includes: VideoPhone, Quicken, ColorDesk, and a Microsoft package that includes Works, Mchemsoc Bookshelf 98, Money 98 and Encarta 98.

Some users may be wary of the Celeron chip that powers the system even with the addition of the 128KB of Level-2 cache Despite that, the system performs well (although still more slowly than a similar speed Pentium II CPU) and offers enough in the way of innovation to merit a second look even from those wary of the Celeron

The digital flat-panel port is forward thinking, as more people consider moving to the lower radiation and space saving design of flat panel monitors (Compaq does already sell a Presario-compatible flat-panel display separately) The joystick and USB ports on the front of the case are also nice, allowing the user to quickly connect digital cameras, scanners or other devices quickly and without having to rearrange the desktop to get at the back of the machine With a good software selection thrown in, this is an all-around nice machine with an eye to usability both now and in the future.

Empac
Model Azura
Street price $2 368

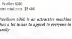
Great components and a ton of RAM make the Azura system included this month not only well rounded, but speedy too

Highlights
- The 350 MHz Pentium II processor gets a performance boost from 128 MB of RAM
- The sound card included is Creative Labs new Sound Blaster Live! environmental audio card (with 3D sound positioning) and it comes with Cambridge Soundworks PC Works set (including subwoofer) to take full advantage of the card
- 8.4 GB hard drive is nice and spacious
- Video is courtesy of the 16 MB Graphics Blaster TNT which also boosts system performance
- Includes 56Kbps GVC modem
- 17-inch Azura monitor provides a good display
- Power switch is beside the CD-ROM open/close switch which could cause problems
- Software includes a Microsoft package (Entertainment Pack, Encarta 98 Virtual Globe, Bookshelf 98) and DVD software

With a 16 MB TNT video card and 128 MB of RAM onboard this Azura system provides excellent performance. Also impressive is the inclusion of the new Sound Blaster Live! card for audio and the great speaker setup Add a large hard drive, and you ve got a great overall system that flies This one should be impressive to nearly everyone

Hewlett-Packard
Model Pavilion 6360
Suggested retail price $2 498

The Pavilion 6360 is an attractive machine that has a lot inside to appeal to everyone in the family



Highlights
- Powered by a 366 MHz AMD K6-2 processor
- Large 9.6 GB hard drive
- A 56Kbps modem is included
- All the cables are color-coordinated for easy setup
- The 17-inch monitor has a great display has a built-in microphone and slots to attach the set of quality Polk Audio 3D multimedia speakers (A system with a 15-inch monitor is also available for a lower price.)
- Software includes a Microsoft package (Works Money 98 and Encarta 98) Quicklink III, Quicken McAfee VirusScan, Disney's Daily Blast and an Hewlett-Packard package (Financial Calculator, Media Rack)

With a good selection of components and a great software bundle, the Pavilion 6360 is a good choice for the family. The large hard drive certainly makes the system more attractive The monitor's display quality is very good and serves as a multimedia hub, with microphone and speaker spots While the performance is a bit on the slow side (additional RAM and video RAM should boost this substantially), for those not overly concerned with raw power, the Pavilion 6360 offers a lot for the family

IBM
Model Aptiva E2U
Suggested retail price: $2 048

From Big Blue, the Aptiva E2U is a basic system that makes a good starting point for the family or home office user

Highlights
- 333 MHz AMD K6-2 processor
- 56Kbps internal modem
- Connections on the back of the box are color coordinated for easier hook up of cables
- The standard monitor included with the E2U package is 15 inches although the package we tested included the larger 17-inch monitor (and the pric-

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ing is with the larger monitor), which offered very good display quality. The system with the 15-inch monitor is cheaper.

- The multimedia speakers included are okay, but users wanting to play music or games with good sound may want to consider a better set.
- Software with this system includes Norton Anti-Virus, Lotus SmartSuite and PC Doctor.

While not necessarily a machine oriented to the whole family, the Aptiva E2U makes a good starting point. As shipped, with reasonable performance, a built-in modem, and Lotus SmartSuite included, the E2U makes a better case for purchase as a home office machine. With extra bays for expansion and USB connectivity, there's room for more hardware to be added to down the road. With the purchase of a few games or children's packages, the whole family should find this to be a useful addition to the household.

Jaba System
Model: JBM 623001
Street price: $2,495

This month's entry from Jaba System is a nice, well-rounded machine with something for both the gamer and the home office user.

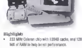
Highlights

- 300 MHz Pentium II processor
- 17-inch Daytek monitor has good picture quality.
- Sound is courtesy of the onboard Sound Blaster card. With the Cambridge Soundworks PC Works speakers attached (with subwoofer), the sound is incredible.
- The user has the choice of a 56Kbps US Robotics modem, or an Intel EtherExpress Pro 10/100 network card, which can be used for cable modem connections.
- The system includes the Microsoft Natural keyboard, and the PS/2 IntelliMouse.
- It comes with the Microsoft Sidewinder Game Pad.
- Software includes the Microsoft Office 97 Small Business Edition, and Microsoft Encarta 98.

Although the system performance is lower than many of the other systems tested this month, and the price is at the top of our range, the JBM-623001 system has a good selection of features that make it worth consideration. The most interesting option is the choice of a 56Kbps modem or a network card—with many more areas now wired for cable modem technology, it's nice to have the choice to purchase a system that is cable-modem ready. With the rest of the features (especially a kickin' sound system), this is an impressive machine.

LCF Advanced Technology
Model: iNet Pro
Street price: $2,228

The iNet Pro system submitted for this month's test has a distinctive design, and a number of attractive features.



Highlights

- 333 MHz Celeron chip with 128KB cache, and 128 MB of RAM to help boost performance.
- Creative Labs DVD drive is included.
- Sound Blaster 128, and SoundImage multimedia speakers (with subwoofer), provide great sound.
- 17 inch TVM monitor is good, although changes in refresh rate or screen resolution may require more adjustment at the monitor end than others. Switching the resolution from 640x480 to 800x600 threw the vertical and horizontal alignments fairly far out of whack, but picture was perfectly fine after the adjustment.
- It came with its own surge-protection power bar. Even though a power bar isn't an expensive item, it's really nice to have when setting up.
- Includes ATI's DVD software, Corel WordPerfect Suite 8 (WordPerfect 8, Quattro 8, Presentations 8, Photo House), and more.
- The warranty on the machine includes six years for labor and three years for parts.

For most, the iNet Pro is a great machine to have: good software bundle, a DVD drive, great sound, and more. Some people may be concerned about the use of the Celeron chip, but with 128KB of cache on the newer Celerons, performance is much better. With the lower price and the longer labor warranty, even Celeron detractors may find the machine an attractive alternative.

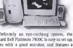
It's worth noting that the iNet Pro was unable to finish the benchmarking tests because of problems in the database portion of the tests (which uses the program Paradox). This kind of problem can crop up for any number of reasons, including a slight incompatibility of the hardware with the scripting used in the benchmarking suite, conflict between the scripts and resident software on the machine, etc. This is most likely something that will never affect users of the machine, and in every other section of the benchmarking, the iNet Pro's results were quite good.

Packard Bell
Model: Platinum 7800C
Suggested retail price: $2,299

The Packard-Bell is certainly one of the most interesting-looking systems of the month, and it comes with a ton of software, too.

Highlights

- 350 MHz Pentium II processor.
- Cables are color-coordinated, for easier setup.
- 6.4 GB hard drive.
- The multimedia speakers included are a bit quiet. Users with a love of sound should consider buying a higher-octane set.
- The 17-inch monitor has a high-quality display.
- Extensive software bundle includes a Microsoft package (Word 97 and clipart, Works 4.5, Encarta 98, Entertainment Pack, and Greetings Workshop), MGI PhotoSuite, Quicken Basic 99, BDE Multipath Movies, and a children's package (Putt-Putt Saves the Zoo, Freddi Fish, and Oddworld).
- Packard Bell is offering software that will convert the language used by the computer to French from English. This may ship with the product, but if not, will be available on demand.



Definitely an eye-catching system, the Packard Bell Platinum 7800C is easy to set up, comes with a good monitor, and features a great software bundle. While it's not the most high performance machine of the bunch (and really could use better speakers), it is still a great overall package with something to appeal to everyone in the family.

Samtack
Model: Pine 400 MHz
Street price: $2,499

One of the "hot-rod" systems received this month, the Samtack machine emphasizes power and expandability.

Highlights

- 400 MHz Pentium II chip helps to yield the best performance of the bunch.
- Multimedia speakers include 3D surround setting.
- Good collection of components, including 56Kbps modem, 32x CD-ROM drive, and an 8 MB ATI Xpert 98 video card.
- Good quality 17-inch Image monitor.
- Software bundle includes 1998 Grolier Multimedia Encyclopedia, Ultimate Photowizard, My Mail Manager, PrintMaster Gold, My Advanced Label

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I'm dreaming of a silicon Christmas

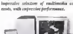
Continued from page ***43***

Designer Best Photo Scenery and Wildlife Essentials

This month, Samtack's Pine System is definitely powerful, with a good collection of components and one of the best benchmarking scores turned in. The performance is largely owing to the 400 MHz Pentium II inside the system which makes this a great starter system for power users who want a basic system to throw additional components into. For those users there is a lot of room to expand with extra slots on the back, and extra bays up front. For most families the system would probably be overkill, but performance fans will love it.

Smartmachine
Model Viper M350
Street price $2 495

This Viper has bite, definitely Smartmachine's entry into our lab test this month has an impressive selection of multimedia components, with impressive performance.



Highlights

- 350 MHz Pentium II processor
- Video card is the Creative Labs 3D Blaster TNT card with a whopping 16 MB of memory.
- The sound card is the brand new Sound Blaster Live! Card which offers true 3D sound and the Altec Lansing speaker system (with subwoofer) offers excellent reproduction.
- 7.5 GB hard drive
- US Robotics v.90 56Kbps modem
- Power switch is located next to the CD-ROM open/close switch, which could be problematic.
- Excellent software bundle includes Corel WordPerfect Suite 8 (WordPerfect 8, Quattro Pro 8, Presentations 8, Iontrol 8, and Photo House) Microsoft package (Encarta 98 3D Movie Maker Golf Cinemania, Works Money Interactive CD sampler and Scenes) Pretty Parrot, Forsaken Unreal Mighty Math, Strategy Challenges vol 1 Imagination Express (Rain Forest and Castle), and Science House.

Priced at the top end of our range this month the Viper M350 packs in a lot of value. This configuration may be overkill for a lot of families, but if there's a serious gamer in the family, this might be the right choice. Both the 3D Blaster TNT and the Sound Blaster Live cards are excellent choices for high intensity 3D games and the speakers and monitor are perfect for taking advantage of them. That's not to say that that's all the system has going for it. The software bundle has a lot for everyone including both office and children's software in addition to the games. For those with the money this is a great system.

STD
Model CompuPartner 350E
Street price $1 989

We always enjoy seeing STD's submissions into our lab tests, and this month's offering is no exception.

Highlights

- 350 MHz Pentium II processor
- The system features a DVD ROM for data needs in the future and for multimedia and movie playback.
- The 17-inch Cybervision monitor is excellent
- System includes GVC v.90 56Kbps PCI-bus modem
- The QDI motherboard has a security feature, which allows the user to lock the whole system including the power switch.
- Software includes PCcillin anti-virus software and MS Home Reference Plus (Encarta 98 Virtual Globe Bookshelf 98 Entertainment Pack 98 and Puzzle Collection)
- System performance was excellent.
- Price point is quite good

The CompuPartner system this month shows why STD systems are favorites around the lab, balancing price features and performance. With DVD as the next optical standard, the inclusion of a DVD drive here is nice especially with the price point of the system. When you throw in an excellent monitor like the Cybervision C72 and a nice software bundle, you've got a great all-around system that's sure to be useful to everyone in the family. The only complaint is that the speakers don't quite perform up to the standards of the rest of the machine. Despite that, a great system at a great price.

TK-IDM Technology
Model Darius AMD 3D Multimedia
Suggested retail price $1 880

Although not as packed with goodies as some of the other systems this month, the Darius system offers a good alternative for the family on a budget

Highlights

- Very competitive price
- With the inclusion of the AMD K6-2 CPU and its built in 3D capabilities, the system is aimed at the 3D multimedia market.
- The monitor and speakers included are good, although users may want to consider an upgrade on both to take full advantage of multimedia.
- 6.4 GB hard drive
- Case is horizontal which allows the user to set the monitor on top to save space.
- CD-Fun Pack includes 1998 Grolier Multimedia Encyclopedia New Year Body Works, Chessmaster 5000 Mavis Beacon Teaches Typing PrintMaster Gold US Atlas & Almanac and World Atlas & Almanac.
- Includes v.90 56Kbps modem

While not flashy, the Darius system has a good collection of components, and a set of

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software that's sure to appeal to the whole family. The fact that the flash is kept to a minimum allows this system to come through at $1,880 suggested retail, which will make it appealing to the pocketbook as well.

Ultinet
Street price: $2,498

Traditionally, Ultinet is good at creating systems for the power users, and its system this month is true to that tradition.

Highlights

- 450 MHz Pentium II chip powers the system which is supplemented by 128 MB of RAM
- Sound is provided by the Sound Blaster 128 PCI card
- An 8 MB Matrox Millennium G200 AGP card is the basic video card provided, and Ultinet's "Christmas bonus" is an 8 MB Voodoo2 3DFX card. (Note: the system was tested without the Voodoo2 card installed, so benchmarking results will vary somewhat)
- The 17-inch Cybervision C72 monitor is an excellent quality display
- 6.4 GB Quantum hard drive.
- The multimedia speakers are okay but serious gamers should consider upgrading
- 56Kbps Kallink modem
- Software package is a choice between a Mini Office Suite or 600 Bits Encyclopedia

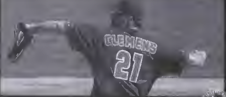
The Ultinet system this month is at the top end of our price range this month, but you can see why, with the high-performance components inside. Key among these is the 450 MHz Pentium II chip at the centre of the system and the 128 MB of RAM to go with it. With a great video card, the Matrox Millenium G200 AGP, performance is even better. The family might find this system a touch overwhelming, but with this kind of setup, the focus is more on the gamer. With this setup, they won't be disappointed.

Editor's Choice

Overall: Empac Azura
In a field of really impressive machines, the Azura is still pretty impressive. The system offers a lot of top-notch hardware, including the Graphics Blaster TNT (which really makes system performance fly), the new Sound Blaster Live! environmental audio card (for amazing three-dimensional sound positioning), a Creative DVD player for both movie and storage needs, and a truckload of RAM onboard. Since the machine comes in at less than our $2,500 target, a $2,500 budget could include a couple of extra software titles to bolster the selection here.

Value: STD CompuPartner 350E
At only $1,999, the CompuPartner 350E is substantially below our $2,500 price cap. Despite that, it manages to include both a DVD drive (which will prove a valuable component in the future!) and an excellent monitor. The software bundle should appeal to many members of the family, and the money saved on this model can go into extra toys or software. ❏

Why does Roger Clemens choose Pathway?



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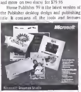
Microsoft revamps creativity line

Microsoft Canada has rolled out its holiday season line including reference games, creativity, and children's edutainment software, gaming hardware and the latest version of the WebTV' Internet system. Of particular interest was the newly reorganized line of creativity-oriented software and the latest version of the WebTV Internet system

Microsoft's Creativity software line includes the Greetings 99 card creation title (\$44 95 minus a \$15 mail-in rebate), produced in association with Hallmark Cards Greetings 99 comes with hundreds of design templates clip art images and decorative fonts, all with a very simple user interface

The popular Pictureit title is also back with MS Pictureit 99 a much expanded new version with greatly expanded "content" (over 750 templates 350 backgrounds stock photos and more on two discs) for \$79 95

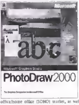
Home Publisher 99 is the latest version of the Publisher desktop design and publishing title It contains all the tools and features required to create a wide variety of printed documents such as essays, brochures, small magazines and even basic Web pages (\$79 95)



Pictureit 99 and Home Publisher 99 are bundled together as the Microsoft Home Publishing Suite, at a combined price of \$129 (\$84 if customers take advantage of a \$45 mail-in rebate)

Perhaps the most intriguing of the latest Microsoft releases is the entirely new PhotoDraw 2000 title (\$239, with a \$55 rebate for registered owners of Microsoft Office 97, Microsoft FrontPage 97 or Corel Draw 6 or later) Photo Draw 2000 is a very sophisticated, yet simple-to-use package that combines vector-based illustration tools (such those found in programs like Corel Draw or Adobe Illustrator) and bitmap image tools (like those found in Adobe Photoshop or Corel Paint)

According to Microsoft representatives Photo Draw 2000 is aimed at the small office/home office (SOHO) market, as well as small to medium-size businesses that need the ability to create graphically rich documents, but have no graphics professionals on staff PhotoDraw 2000 contains extremely powerful tools under a deceptively simple interface As such, it's the most impressive new graphics package aimed at the general computer user rather than design specialists



Microsoft has attempted to increase the degree of consistency in the user interfaces of all its new titles giving them a "look and feel" that is more familiar to users of Microsoft Office and Windows 95 or Windows 98 The combination of many years of development of programs such as Publisher with the new software technologies and interface innovations in PhotoDraw 2000 makes the latest creativity software library from Microsoft worth a close look.

—Jeff Evans

Newsweek launches Web site

NB—Far behind rival *Time Magazine*, *Newsweek* has launched a Web site becoming one of the last major media outlets to establish an Internet presence. The site combines *Newsweek* coverage with breaking news from the *Washington Post* and information from the *Encyclopedia Britannica*. In addition the Periscope, Cyberscope and Newsmakers regular features are updated daily

http://www.newsweek.com

Miniaturization big at Tokyo expo

Weighing about a pound, the C1 comes with an XGA color screen, 3GB hard drive, Windows 98, a built in modem, 32 MB of RAM, a microphone, stereo sound, and a fingernail sized high resolution video camera

By Jeff Evans

The recent PC Expo in Tokyo, held in late September showcased all the latest products the high tech giants of Asia will bring to the world market in 1999 as well as inventions from the West that Asia seems prepared to adopt In short the direction is towards radical miniaturization Since I've already seen many of the new products from American manufacturers such as Compaq, I concentrated my time at the show on discovering new products from the other side of the Pacific Rim

Handheld computers with ingenious connectivity options were everywhere at the show including the ultra tiny ultra thin Wintel (Windows operated/Intel powered) notebooks with a host of tiny, powerful accessories for increasing the productivity and power of these miniaturized info gadgets

Microsoft's Windows CE operating system seems to have a very strong following in Japan, given the bewildering profusion of handheld PC form factors from Sharp Sony NEC LG Electronics and HP Color screens are also becoming standard on higher end handheld devices.

Most CE devices were shown with add on hardware such as wireless and wired modems and bar code readers. Software for contact management specialized point of sale, database Web browser and email programs were also shown It all added up to complete powerful corporate business solutions in tiny packages.

There was a huge number of flash memory products aimed at meeting mobile computing users demands for portable data storage Sony's data Stick was a notable new entry in this product category

The standard for new notebook computers is now, literally, notebook sized—about 20x25x2.5 cm (8x10x1 in.) The most radical new super-compact notebook was the Sony VAIO C1 (not available in Canada at time of writing) which is about the size of Toshiba's Portege handheld computer

Weighing less than 500 g (about 1 lb.) the C1 comes with an XGA color screen, 3GB hard drive, Windows 98, a built-in modem 32 MB of RAM, a microphone and stereo sound It comes with a fingernail size, high-resolution video camera for use as still photography video-conferencing and video and audio recording The C1 also has a Firewire IEEE data port and a full range of multimedia editing, telecom, and business software

Sony showed off the digital video muscle of its new VAIO 505, by hooking it up to a digital video camcorder via its Firewire IEEE 1394 port (Sony's implementation of Firewire is named i-Link).

Different models of digital cameras were also in abundance at the show with particularly strong displays from Sony, Olympus and Fuji

Apple had a remarkably strong presence at the show with its new iMacs and G3 Powerbooks. Apple was unique in having casually dressed California style nerd/hippie demonstrators showing its products. By contrast the booths of other exhibitors were staffed by male demonstrators wearing company outfits or suits, and female demonstrators often dressed in airline hostess-style company uniforms or—shockingly—bikinis

Among the North American firms at the show were Symantec, with its anti-virus and utility software Compaq, which has made great inroads into the Japanese PC market in the last several years, MetaCreations and Adobe both with their graphics and publishing software, Wacom with its new Intuos touch sensitive graphics tablets and iMation, whose latest USB (universal serial bus) version of the SuperDisk drive was present in many booth displays

Although Japan is suffering the serious effects of Asia's economic crisis its computer industry is showing great strength and staying power Driven no doubt by strong exports to the West

If PC Expo Tokyo is any indication by this time next year there should be a profusion of powerful relatively inexpensive miniaturized notebooks on Canadian store shelves And the drive towards a fundamental morphing of the personal computer into the connected personal portable computer may be well under way ❑

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1 GB PC Card storage in production

By Sami Menefee

SAN JOSE, Calif (NB)—A Scottish company has done IBM one better Calluna Technology Ltd has started production of what it says is the industry's first 1 GB Type III PC Card storage device The drive is available now, the firm says

Newsbytes notes IBM announced in September a breakthrough Type II microdrive that has only a 340 MB capacity and that will not ship until mid 1999

Like IBM's Microdrive the Callunacard CT 1040 RM incorporates a tiny hard drive into a PC Card though the Type III card it uses takes up both Type II PC card slots whereas a Type II card can be used concurrently with another Type II device such as a modem, digicam download card or the like

Calluna's new microdrive-like device targets digital video photographers and other non laptop users who need large amounts of highly portable storage capacity to transfer data. Other target audiences include original equipment manufacturers (OEMs) that make portable PCs handheld terminals, telecommunications equipment automotive systems, digital cameras and factory automation equipment

The firm says the tiny drive, called the Callunacard, can hold up to 80 minutes of digital motion pictures, doubling the highest capacity card currently on the market

In effect the tiny drive may be useful with any device that has a Type III PCMCIA slot

One Calluna spokesperson said the PC Card is "perfect for use by mobile PC users on the go or who spend a lot of time in the field or don't want to add an extra layer to their ultraslim notebook."

The firm says the tiny drive called the Callunacard can hold up to 80 minutes of digital motion pictures, doubling the highest capacity card currently on the market and satisfying the needs of most digital photographers who need at least one hour storage capacity

With mobile computer makers vying for number one position in the lowest weight category the spokesperson said, "This card gives makers a way to make their product lighter, because this PC Card weighs less than a notebook sized 2.5 inch hard drive and you don't need to add the slice's extra weight "

"People are loving this product," she added "We took it on tour recently and it was the thing people were interested in the most "

The spokesperson continued "The firm says this is the best high-capacity option available for people who need high speed laptop back-up and data transfer to another device and want to do it without cables connectors or extra boxes." The other device must also have a Type III PC Card slot

A tech support spokesperson said the drive doesn't need any software but instead uses a standard Windows 95 driver. When plugged in the system looks for the driver and prompts the user to insert the disk with the driver on it.

Once the driver assigns a drive letter the slot becomes available for users to hot swap drives if they need even more storage on the fly No reboot is needed

The Callunacard carries a US$699 price tag OEMs can get the card directly from the firm Others will see the product soon at computer resellers and retailers

The technician said the firm has started production of the drive It has twin platters and four read/write heads. The firm is also in production on a single-platter two read/write head CT 521 RM model a 520 MB drive to replace the firm's previous CT 520 RM product. It also is a Type III rather than a Type II card

The technician said, "Calluna has plans for a Type II 240 MB drive that will compete with other Type II's on the market like IBM's Microdrive " It should hit the market sometime in January before the Microdrive itself does he said ❑

Calluna http://www.callunacard.com

Business Week entrepreneur's resource

NB—This is a daily resource for entrepreneurs from *Business Week* magazine Visitors can find current news and columns from the magazine and a large resource section which covers finance, technology, market research, buyer's guide, personal business and more Readers can also submit questions to be answered by *Business Week's* writers and advisors.

http://enterprise.businessweek.com

Descriptive Video Service

NB—Provided by WGBH the Descriptive Video Service has been "describing" television visual images for people who are blind or have low vision for more than eight years. The Web site has information about this free service and also includes information about the more than 1,600 PBS programs 50 classic movies and contemporary video titles available from the service

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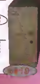
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WHAT'S NEW

Continued from page **33**

tion as a W3C Recommendation.

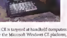
The organization says the specification reflects cross-industry agreement on a standard API (applications programming interface) for manipulating documents and data through a programming language, such as Java

A W3C Recommendation reportedly means that a "specification is stable, contributes to Web interoperability, and has been reviewed by the W3C Membership who favor its adoption by the industry"

The specification was created and developed by the W3C Document Object Model (DOM) Working Group The organization says it "defines the foundation of a platform- and language-neutral interface to access and update dynamically a document's content, structure, and style"

AirCard wireless modem for HPCs

NEW YORK (NB)—Sierra Wireless has introduced the AirCard wireless modem PC Card AirCard CE is targeted at handheld computers that use the Microsoft Windows CE platform, and enables wireless access to enterprise networks intranets, email, and the Internet.



Sierra says it has incorporated advanced power management techniques in the AirCard CE to increase battery life An Alert Mode is also supported that allows the Windows CE computer to receive messages via the AirCard CE even when the computer is off

The AirCard CE comes with Watcher and WirelessExpert for Windows CE utilities that allow for simple modem installation, configuration, and use

Sierra Wireless http://www.sierrawireless.com

Et Tu, Nerdus ancient role playing

An intriguing new edutainment series developed by U.K.-based Anglia Multimedia (published in North America by Cambridge Research Group) consists of two titles, Ancient Egyptians and Ancient Romans The two CD-ROM based games allow Windows users to become Egyptian or Roman characters in interactive 3D settings that the developer describes as historically accurate.

Users can navigate an Egyptian tomb or a Roman town, and gain some feel for what it must have been like to actually live in these ancient societies —*JE*

Anglia, http://www.anglia.com uk/education
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Canada's virtual bookshelves filling up

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Continued on page **52**

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DLink 8-port Hub 519
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WHAT'S NEW

Continued from page **50**

Bookselling is a $2-billion a year business in Canada though only a small percentage of that is currently done online ChaptersGlobe.com plans to entice book buyers with a catalog that contains almost 20 times as many titles as can be found on the shelves of its flagship store and by offering up to 40 percent discounts off list prices.

Visitors to the site will also be able to discuss ideas and opinions with authors and literary experts about fiction Canadian literature creative writing, poetry, technology and more according to the company

Chapters is not the first major Canadian bookstore to make a splash online in the past few weeks, Bookshell.ca, an independent bookstore based in Guelph, Ont., recently teamed up with Sympatico. The launch of an online bookstore alliance between Southam Inc and the Canadian Booksellers Association, is also expected sometime later this year.

The been-there-still-doing-that crown for online bookselling in Canada, however, goes to Vancouver's Duthie Books, which launched its online store way back in the summer of 1994 The site—originally dubbed The Virtual Bookstore, and now Literascape—has the same searchable virtual shelves as the other online vendors, as well as an electronic version of its literary magazine *The Reader* It also hosts The Publisher's Showcase and Macneill Library Service —*KS-R & MJ*

Bookshell.ca, http://www.bookshell.ca
ChaptersGlobe, http://www.chaptersglobe.com
Duthie Books, http://literascape.com

Good new year predicted for WinCE

Microsoft's Windows CE operating system, announced with great fanfare at Comdex Las Vegas in 1996, was supposed to be the slimmed down version of Windows that everyone would carry in their pocket, loaded onto handheld computing devices Then the 3Com Palm Pilot happened, in a big way

Since then, Windows CE devices, though more successful than the late lamented Apple Newton Message Pad, have had to play second fiddle to the Pilot Despite this setback there are still big hopes for the CE operating system as was demonstrated at the recent Microsoft Developers Conference in Denver and in a flurry of new product announcements

Microsoft chairman Bill Gates claimed in speeches in Denver and Toronto in October that CE will spread rapidly into new handheld computing devices, set top boxes, and embedded computing devices in 1999 and beyond. A new version of Windows CE was announced, and Hewlett-Packard, Hitachi, and LG Electronics, among others promoted new CE-based products

As we went to press, HP Canada dropped by our offices with its Jornada 850, which is based on the latest CE operating system The $1 570 unit more closely resembles a Windows 98 mini notebook in size but weighs only 1 12 kg (2 5 lb) and operates for about 10 hours on the standard rechargeable battery Expect a full report on this machine in the coming months —*JE*

Windows CE anti-virus app debuts

TEL AVIV, Israel (NB)—Iris Software is taking the wraps off what it says is the first full-feature anti virus package for the Windows CE environment.

According to the company, Iris CAT (Compact AnTi virus) builds on the fact that Iris Anti virus was the first anti-virus application on the market back in 1987 tackling the then emerging danger of computer viruses

Since then, the firm says, leading software and hardware companies around the world have made Iris their OEM (original equipment manufacturer) option for virus-related product offerings

Continued on page **106**

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- Prints envelopes up to 9" x 12"

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- Professional 1200 x 600 dpi
- 4Mb Standard Memory (36Mb max.)
- Includes USB port
- PCL6 emulation for DOS printing
- Prints envelopes up to 9" x 12"

HL-1060

- Dual Bin (400 sheet)
- Up to 10ppm
- Professional 1200 x 600 dpi
- Prints envelopes up to 9" x 12"

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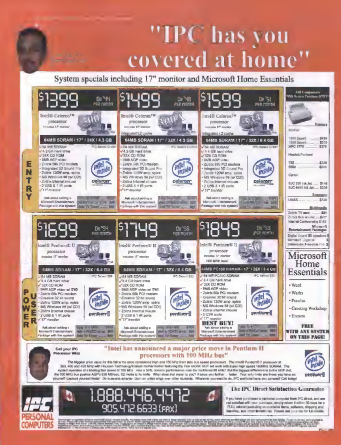

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- ✓ 24X CD ROM
- 8MB AGP video
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- Integrated 3D Sound Pro
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix Internet mouse
- 2 USB & 1 IR ports
- ✓ 17" monitor

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- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem
- Integrated 3D Sound Pro
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix Internet mouse
- 2 USB & 1 IR ports
- ✓ 17" monitor

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Includes 17" monitor
Integrated L2 cache

64MB SDRAM / 17" / 32X / 6.4 GB

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- ✓ 6.4 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem
- Integrated 3D Sound Pro
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix Internet mouse
- 2 USB & 1 IR ports
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- Zoltrix 56k PCI modem
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix Internet mouse
- 2 USB & 1 IR ports
- ✓ 17" monitor

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- ✓ 6.4 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video w/ I740
- Zoltrix 56k PCI modem
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix Internet mouse
- 2 USB & 1 IR ports
- ✓ 17" monitor

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Add a PD/CD drive $99
Add TV Tuner

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Intel® Pentium® II processor
Includes 17" monitor
100 MHz bus!

64MB PC100 SDRAM / 17" / 32X / 8.4 GB

IPC Select 350

- ✓ 64 MB PC100 SDRAM
- ✓ 8.4 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Zoltrix internet mouse
- 2 USB ports
- ✓ 17" monitor

BEST BUY!

Ask about adding a Microsoft Entertainment Package with this system!

Add TV Tuner

Add Components With System Purchase ONLY!

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Brother

1840 (laser)	$499
1020 (laser)	$379
MFC 1770	$379

Hewlett Packard

730	$339
895c	$249

Canon

BJC 250 Ink Jet	$149
BJC 4400 Ink Jet	$239

Scanners

UMAX	$129

Multimedia

Zoltrix TV card	$89
Zoltrix Sub woofer	$49
Internet Conferencing	$189

Microsoft Entertainment Packages

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- Microsoft mouse
- ✓ 15" monitor

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- ✓ 32X CD ROM
- 8MB AGP video
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- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Microsoft Natural Keyboard Elite & mouse
- 2 USB & 1 IR ports
- ✓ 15" monitor

Includes MS Office 97, SBE

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Includes 15" monitor
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IPC Business Select 333
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- ✓ 8.4 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem or 10/100 ethernet card
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Microsoft Natural Keyboard Elite & mouse
- 2 USB & 1 IR ports
- ✓ 15" monitor

Includes MS Office 97, SBE

SOHO

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Intel® Pentium® II processor
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100 MHz bus!
ATX Format
64MB PC100 SDRAM / 17" / 32X / 8.4 GB
IPC Business Select 350
- ✓ 64 MB PC100 SDRAM
- ✓ 8.4 GB hard drive
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- 8MB AGP video
- Zoltrix 56k PCI modem or 10/100 ethernet card
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Microsoft Natural Keyboard Elite & mouse
- 2 USB ports
- ✓ 17" monitor

Includes MS Office 97, SBE

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Intel® Pentium® II processor
Includes 17" monitor
100 MHz bus!
ATX Format
64MB PC100 SDRAM / 17" / 32X / 8.4 GB
IPC Business Select 400
- ✓ 64 MB PC100 SDRAM
- ✓ 8.4 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem or 10/100 ethernet card
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Microsoft Natural Keyboard Elite & mouse
- 2 USB ports
- ✓ 17" monitor

Includes MS Office 97, SBE

$2649 Or $85 PER MONTH
Intel® Pentium® II processor
Includes 17" monitor
100 MHz bus!
ATX Format
64MB PC100 SDRAM / 17" / 32X / 10.2 GB
IPC Business Select 450
- ✓ 64 MB PC100 SDRAM
- ✓ 10.2 GB hard drive
- ✓ 32X CD ROM
- 8MB AGP video
- Zoltrix 56k PCI modem or 10/100 ethernet card
- Creative 32 bit sound
- Zoltrix 120W amp. spkrs
- MS Windows 98 (w/ CD!)
- Microsoft Natural Keyboard Elite & mouse
- 2 USB ports
- ✓ 17" monitor

Includes MS Office 97, SBE

Printers

Brother

1040 (laser)	$488
1020 (laser)	$379
MFC 1770	$379

Hewlett Packard

730	$389
890c	$248

Canon

BJC 250 Ink Jet	$149
BJC 4400 Ink Jet	$239

Scanners

UMAX	$139

Multimedia

Zoltrix TV card	$89
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Internet Conferencing	$189

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4 MB PCI	16 BIT 3D SOUND CARD	32X CD-ROM DRIVE	100 WATT SPEAKERS

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32 MB SDRAM	15" COLOUR MONITOR	4.3 GB HARD DRIVE	KEYBOARD (ENHANCED)
4 MB AGP VIDEO CARD	16 BIT 3D SOUND CARD	32X CD-ROM DRIVE	100 WATT SPEAKERS

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INTEL P II-350 CPU	V.90 DATA/FAX/VOICE MODEM	ABIT 13H6 BX440 M.BOARD	1.44 FLOPPY DISK DRIVE
64 MB SDRAM 100 BUS	17" .26 DIGITAL MONITOR	6.4 GB HARD DRIVE	SOUND FORCE 800 SPEAKERS
8 MB AGP VIDEO CARD	SOUND BLASTER PCI 128	40X CD-ROM DRIVE	MOUSE AND PAD

INTEL PII-400 MMX

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PRO'S CHOICE

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WINDOWS '98 CD & MANUAL

INTEL P II-400 CPU	V.90 56K INTERNAL MODEM	ABIT 13H6 BX440 M.BOARD	1.44 FLOPPY DISK DRIVE
128 MB SDRAM 100 BUS	17" .26 DIGITAL MONITOR	10.2 GB HARD DRIVE	SOUND FORCE 800 SPEAKERS
8 MB AGP VIDEO CARD	SOUND BLASTER LIVE VALUE	40X CD-ROM DRIVE	MOUSE AND PAD

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Gifts for the notebooker

By Ross MacDonald

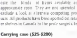
One of the less appreciated aspects of the computer revolution is how much easier it has made Christmas shopping. Anybody you know with a computer either needs or wants something, largely in response to the industry's perpetual release of newer, faster, cheaper versions of just about everything that has gone before.

Those who know desktop owners are particularly fortunate in this regard because there's always a newer sound card, faster modem or cheaper chip to chase after. But much under-appreciated are the portable owners—those intrepid souls who have committed a lot more money and a lot more trust to a far less modular machine.

However, third party manufacturers are gradually realizing the market potential of add-ons for portables and have come up with a number of products in a variety of price ranges specifically suited to the computer on the go. A caveat, however, must stand that there are very few "stocking stuffers" of note to be had, so the giftor will be necessarily indicating more than a passing fiscal regard for the giftee.

Following is a scattershot list of goodly suggestions suitable to, if not specifically created for, notebook computers. It should be noted that where specific brands, products or prices are mentioned, they serve only to indicate the kinds of items available and approximate costs. They are not intended to exclude a look at alternate competing products. All products have been spotted on retailer shelves in Canada in the price ranges cited.

Carrying case ($25-$200)



The most logical place to begin, perhaps, is with carrying cases. It's likely that your intended already has one. However, there is an astounding variation in quality and utility among cases that makes this a very good gift.

The primary consideration for a good case is padding. Despite the care normally taken by notebook owners, there always seems to be some banging and jarring going on. Many cheaper cases paradoxically stint on the padding, which should completely encompass all sides of the computer inside. Although soft sided cases are the current fashion, rigid cases are also available.

Next, make sure the capacity and pocket configuration suit the intended user's needs. Many carry cases have only room for the computer and a few disks, while many notebookers might also have extra equipment to take along—like storage devices, mini scanners, portable printers, etc., which unfortunately means a plethora of power bricks, a cobweb of cables and a battalion of battery packs must tag along too.

Other things to consider are material (nylon, leather, aluminum or even titanium), quality of construction (how the handles and zippers are attached, for example) and perhaps even the inclusion of adequate locks.

Of course, it's doubtful that the perfect case will ever be found for each individual—outside of custom construction—but many manufacturers offer a variety of quality sizes, materials and movable interior dividers to accommodate even the most persnickety computrevist on the go.

Portable printer ($350-$550)

As portable computing has become more popular, many manufacturers have come up with printers specifically designed to go along for the ride. These often have the same abilities as their larger cousins, but squeezed into units not much bigger—and occasionally smaller—than the notebook computer itself.

The newest entry into this category is the Canon BJC-50, an item that sells for around $500. This 30.5x11.4x5 cm (12x4.5x2 in.) bubble-jet is capable of photo quality color output on a variety of common and exotic media, and will fit exceptionally well into most carrying cases. It includes an IrDA (infrared) interface, and a universal power adapter for use anywhere in the world.

Options include a sheet feeder (which, unfortunately, nearly doubles the dimensions of the machine) and a lithium ion battery pack. Another handy option that fits this and other Canon portable printers is the IS-12 color scanning cartridge ($150), which fits into the ink cartridge housing and turns the printer into a reasonable (but not terrific) sheet feed scanner.

There are other portable printers on the market, from Canon and competitors, but all will be recommended by the price tag to only the rich and in love.

Portable scanner ($150-$250)

If the computerist on your list already has a portable printer or doesn't particularly need one, a portable scanner might be in order instead, and will cost you a lot less. Scanners of all types have become surprisingly affordable and extremely popular for all types of

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work and play applications but they are generally of more dimension and weight than anyone would want to cart around The only drawbacks to portable versions at this point is that they cost a bit more and are necessarily sheet-fed (originals have to be fed in individually) as opposed to the larger footprint flatbed configuration

As mentioned above those with specific Canon printers have the option of purchasing a special tiny scanner cartridge that will convert their printer into a reasonable scanner

For those who can't take advantage of that, Visioneer has produced the Strobe—a beautiful little color sheet fed scanner no bigger around than your wrist and only 30.5 cm (12 in.) wide.

External storage device ($200-$500)
These are also big ticket items but extremely useful in many cases Portable computers come with a hard disk and floppy disk but many power users find these inadequate for serious storage and data transfer in the long run Several companies have addressed this by producing external versions of hard drives and floppy drives to augment what's already there But they've also designed some very nice large capacity disk drives, tape drives and

even recordable CD ROM drives that connect to the notebook in a variety of ways

The most popular of these is what's known as a high speed/high capacity floppy replacements the most common being the Iomega's Zip and Imation's SuperDisk drive These are very handy for storing and backing up large files and directories but with limitations to capacity and speed Sony also announced a 200 MB floppy replacement (which is incompatible with both the Zip and SuperDisk formats) and it may soon be available in stores

Such devices can connect to the computer in several ways and may be sold as distinct models depending on the kind of connection they use (parallel port PC Card adapter SCSI) This is a serious consideration for the purchaser—make sure you buy the device that will work with your giftee's system

One company called Microsolutions has introduced a whole line of readily available external devices including: floppy drives hard drives 8 GB tape drives CD recordable drives, and even a PD drive—a data storage technology with a lot of potential that never really caught on

All the Microsolutions devices connect through a computer's parallel port—which is where a printer usually connects and is little respected as a thoroughfare for demanding input and output tasks because it's regarded as too slow Microsolutions however claims to have gotten around these limitations through both hardware and software development so speed and efficiency are maximized. Limitations of the port aside parallel connection has the great advantage of being quick, easy and universal to all computers.

Also available for those with older portables are CD-ROM players with little sound systems built in that can connect either by special cards or in the case of Microsolutions through the parallel port. These $300-plus devices add full multimedia capability However, notebooks made in the last two or three years already support multimedia

Due to the variety of devices and interfaces available it is advisable to covertly determine before hand which configuration of which device your giftee will most appreciate

Security system ($35-$150)
Notebook security systems approach the problem of theft and/or access in a variety of ways, the most common being a lock and cable system to make it at least difficult to liberate the machine from its resting place These are cheap and easy to apply

On a more sophisticated level you'll find devices like the DefCon Security System from Targus/Port Inc. which cables a beeper-sized motion alarm to the computer or carrying case If it is moved it screams. Also on the market are marking systems that let you apply identifiers that can only be detected with a UV light (usually included in the kit) However if you're using one of these, you're computer has already left the building They're only useful for proving that any recovered items are actually yours

PC Cards ($100-$500)
As with storage devices these credit card-sized add-ons perform a variety of functions that let the portable owner squeeze more out of their machines. The most common PC Cards are undoubtedly modems which many users purchase for upgrading to newer faster technologies Also available in PC Card format are network cards, SCSI interface cards sound cards, at usually high prices

Very new to the market from ADS Technology is a card that adds two USB (universal serial bus) ports to notebooks for $110 USB is a relatively new interface system but expectations are high that most add-ons of the future will use it There are very specific compatibility issues defined for this card however so you'll have to check against the machine you're buying it for

One of the more appreciated PC Cards to hit the market are those designed to connect joysticks and game pads—an interface virtually ignored by notebook manufacturers but demanded by gamers. New Media Corp is a major PC Card manufacturer and provides a good example in its GamePort joystick connector for $100.

Miscellaneous
External numeric keypad For the accountant $50-plus

External speakers: Most notebook built in speaker systems are abominable Amplified portable speakers are cheap and readily available and sound is dramatically better $20-plus.

Continued on page 67

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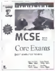

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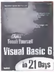

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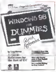

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By Jean Allen-Ikeson

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Fisher Price's Little People for decades one of the most popular toys sets for toddlers have come to the little screen With a computer and the Discovery Farm disc kids and their mom or dad can now play and sing along with their favorite Little People

This software is "lapware" a category of programs for the very young to be played while sitting at the computer on a parent's lap. This particular game is rated for children 18 months to three years of age

Discovery Farm has four activities matching farm animal mothers to their babies feeding animals singing with a barnyard chorus and helping farmer Jed plant water and harvest his crops The commands are very simple and help kids become familiar and comfortable with computers. In one activity, for example, Jed asks the tot to help him water crops To do this the child can push any key on the keyboard.

The game activities that use the mouse to make selections are good for three year olds beginning to develop their coordination.

Discovery Farm offers loads of colorful animation cheerful songs and a printable coloring book. It also includes a bonus sing-along CD called *Barnyard Rhythm & Moos* which will provide amusement for children up to five or six years of age with counting and word recognition tied into favorite animal songs

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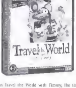

In Travel the World with Timmy, the title character a frog takes players on a hot air balloon ride to Japan, Argentina and Kenya This disc from Edmark IBM's educational software division is completely different from the usual edutainment fare for the four to six year old group Besides learning early reading and math skills in English, they can learn the equivalent skills in Spanish Japanese and Swahili

On their journey they learn fun songs information about animals plants cities, landmarks and the culture of the three countries Travel the World with Timmy includes coloring books and crafts from each country that may be colored and printed out Kids learn why each craft—kites paper dolls, masks puppets belt buckles and more—is unique to that country

Kids will have fun counting in each language and learning a few basic vocabulary

Continued on page **64**

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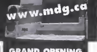

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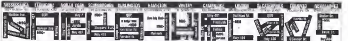

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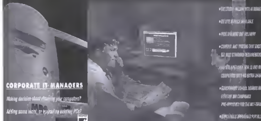

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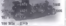

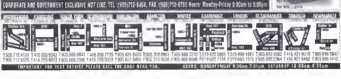

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Software gifts for growing minds

Continued from page 60

words. For more practice, the disc also links to an online dictionary

Great Adventures Castle
From Fisher Price/Knowledge Adventure
Tel 800-545-7677
http://www.knowledgeadventure.com
For Windows Power Mac
Price $35

Great Adventures Castle is a gentle game that keys into a love of historic super heroes in this case knights and their castles The game for four to seven year olds challenges players to find the hidden knights and protect the kingdom from Vigor the villainous Viking.

Also included are seven activities such as designing and printing a knight comic book a certificate of knighthood and special stickers (Avery Kids inkjet sticker paper comes with the Great Adventures disc)

The graphics are colorful and encourage kids to explore and test their critical thinking skills There are also five sing-along songs that kids of this age will enjoy

To properly span this age range, Fisher Price has included multiple levels of game play for 12 play areas, which will provide hours of variety and fun.

Sky Island Mysteries
From Edmark
Tel 800-691-2986, http://www.edmark.com
For Windows Macintosh
Street Price $24.99

Sky Island Mysteries offers equal parts entertainment mystery and education for eight to 12 year olds Parents who have purchased Thinkin' Things titles in the past will like this new program Like the others it provides hours of play involving complex logic and problem solving strategies and development of communication language and resource management skills

There are 14 mysteries to solve that become progressively more challenging Kids help Detective Joe Cluesoe find the evil villain The level of difficulty may be adjusted for each activity

One of the more interesting skills this game teaches is efficient use of search engines In the game kids search for the suspects that match their clues As they progress players learn valuable strategies that are transferable to combing through multimedia encyclopedias or online search engines while researching school projects

Sky Island Mysteries is one of the outstanding products for this age group It makes a wonderful antidote for the cartoon TV channels. ❑

Free anti-virus scans from Trend

NB—Trend Micro's Internet based virus scanning service HouseCall has been updated to include a check for the recently discovered "XM_COMPACT" virus that infects Excel Workbooks in Microsoft Excel versions 7.0 and 8.0 The HouseCall service will scan your local hard disk for viruses and is available free of charge
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A little something for your mouse

While it never moves rather than your desktop think of the thousands of kilometres your mouse has travelled on your behalf. So, how do you reward this kind, faithful creature? How about by giving it a luxury carpet of its own?

High Voltage Graphics, based in Colorado has developed a line of MouseRug mousepads that look like luxury Oriental and Persian carpets—complete with fringe.

Not only will they dress up your desk, the company claims they are good for your mouse with the pile of the "carpet" continually cleaning the mouse's ball mechanism. High Voltage says the MouseRug fibers are also treated with a conductive finish that helps ground the mouse by drawing static electricity. The fibre surface is permanently cast into the rubber backing so the two surfaces will not peel apart.

High Voltage sent a MouseRug (a design based on earth tone American Indian flat weave rugs) to *TCP* for review in August and while I can't attest to the claim that it will keep my mouse healthier (I started using a new mouse during this period) it hasn't done it any harm and the MouseRug has garnered "Wows" from almost everyone who has seen it.

Real hand made rugs—including flaws and imperfections—were scanned and digitized so the miniature versions of the carpets looked as genuine as possible, High Voltage says. New patterns to be released this winter are the Turkish Star Ishak (seen here) and a Celtic pattern.

While not yet carried widely in computer stores, MouseRugs are available in many museum and design stores across North America. They can also be ordered from the MouseRug online store (http://www.mouserug.com) or by phone (800-896-2314). MouseRugs are US$19.95 each, not including shipping and handling.

—*Megan Johnston*

Gifts for the notebooker

Continued from page 58

Digital image capture device: A very small device that makes the injection of images and movies from a VCR, video camera or digital camera into any computer extremely easy. Examples are Play Inc.'s Snappy and ArcSoft's ZipShot. $150-$300.

Video/digital image camera. These are very small cameras that clip to the lid/screen of your notebook to capture and send either still pictures or video into your computer. Some even facilitate video phoning and conferencing on the Internet with the right modem and software set up. $125-$250. The most well known of such cameras come from Connectix, which makes several models in several price ranges with varying quality and abilities. Connectix was recently purchased by Logitech.

Software ($100+)

There are only a few applications specifically created for portables. Symantec, for example publishes two applications (PC Anywhere, Mobile Essentials) to simplify back up, access and data transfer between your portable, your home/office computer files and manage any network tasks from remote locations.

Another application, Network/Unplugged from Mobilit Inc. in Edison, N.J., maps your network connection and allows you to specify which network folders and files you need to work on offline. Once you've logged off the network, you still have access to those files and folders just as though you were still logged onto the network. When you do log back on, the application performs a synchronization between the files on the notebook and those on the network.

This sounds very cool although we haven't yet put it through its paces. A trial version can be downloaded from the company's Web site (http://www.mobilit.com). ❑

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In brief

CanadaOne aims for speed

The internet can be a gold mine of information for businesses but the sheer volume of info that often has to be waded through before striking paydirt often discourages business people for whom time is money from even trying to use the Web

Bie-Zone Internet Group, a Stouffville, Ont.-based firm, has published CanadaOne, a free Web site aimed at making useful Internet-based information accessible in an efficient way. The site gathers over 450 Canadian business information resources in one location including a searchable trademark site, and links to business publications, associations and government agencies.

According to Julie King, managing editor of CanadaOne "Having taught Internet-business seminars and participated in online forums I knew that business people were frustrated They needed to find good business information online—information that was relevant to Canadian companies. Our solution was to create two distinct search engines. 'Resources' provides links to the best business information online and 'Directory' is a place where businesses can list their sites for free."—*Jeff Evans*

Tel 905-888-3082 julie@bie-zone.com,
http://www.canadaone.com

Samsung unveils Ego handheld

SEOUL (NB)—Samsung Electronics Co. Ltd has unveiled a handheld computer based on Microsoft's new Windows CE 2.1 operating system.

The Ego-Note is based on a Toshiba TX3922 series 32-bit RISC (reduced instruction set computer) microprocessor running at 148 MHz and features an 8.2 inch color LCD screen It comes with 16 MB of RAM which can be upgraded to 48 MB Key features include a 56Kbps modem compact Flash Card slot PC-Card slot, USB port, RS-232C serial port, Fast IrDA port video output socket, modem jack, and mouse, keyboard, and parallel ports. It measures 22.7x19 7 cm and weighs in at just under 1 kg. It will run off two AA batteries for a maximum of three and a half hours or for up to 10 on a rechargeable lithium ion battery.

The Ego-Note debuts in December with an estimated retail price of US$800

http://www.egonote.com

3M intros videoconferencing family

HONG KONG (NB)—3M's visual systems division recently strengthened its family of

Continued on page **87**

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TECHNOLOGY SOLUTIONS FOR BUSINESS IN CANADA

DECEMBER 1998

CBT addresses professional needs

Learning tailored to user preferences

By Michelle Schoffro & Curtis Cook

Enter the future of professional development you can sit comfortably at your computer in your home or office, go online insert your CD-ROM, be asked a variety of questions to determine how you learn best (through graphics audio hands-on quizzes, etc) and walk through learning that has been customized to your unique needs. Through computer-based training (CBT) that "future of professional development" is now a reality

Multimedia technology is having an incredible impact on learning and training It can enrich the entire learning environment creating truly interactive experiences where students are fully engaged in the learning process. And as the global economy becomes increasingly knowledge-based it is likely that the role of CBT will grow in step

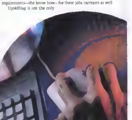
Professionals who have put in a busy day at the office can choose whether they want to train at home or in a classroom during the evenings and weekends. CBT is creating options for people who want to maintain or upgrade their skills to stay competitive in the work force

The Information Highway Advisory Council (IHAC) recognizes the integral role learning and training holds in Canada's future particularly as it tries to build the knowledge economy The council recommends "an environment for lifelong learning in which all Canadians will have access to the widest possible variety of learning opportunities and tools in order to succeed in such an economy."

This is the federal government's way of saying that knowledge is the key resource for competing in a global economy, and that the quality of the workforce is a critical factor. And CBT is a perfect fit for the required "lifelong learning," because it can offer independent, self-paced instruction and testing on an infinite number of subjects and skills.

Another study conducted for Human Resources Development Canada (HRDC) revealed that the increasing use of CBT in the workplace has caused "a general 'upskilling' of existing jobs." The findings also backed earlier views that as this type of training becomes more ingrained into business operations not only do the number of skilled jobs increase (and the number of unskilled jobs decrease) but the skill requirements—the know how—for these jobs increases as well

Upskilling is not the only



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CBT addresses professional needs

Continued from page 69

benefit of using CBT in the workplace. Probably one of the most common arguments in favor of CBT is a variation on the following: people remember 20 percent of what they see, 40 percent of what they hear and see, and 70 percent of what they see, hear, and do. More detailed studies have illustrated that the return on investment (ROI) for a company using CBT goes beyond enhanced learning retention.

Investing in CBT

But consider the investment. Upfront, development of custom CBT will likely be more expensive than a couple of training sessions on a specialized topic led by an outside expert. If you are lucky, your training needs may be met by a reasonably priced off-the-shelf product from a local computer store. If you cannot fulfill your training needs in this manner the primary costs for your CBT will be incurred during development. Costs to maintain and deliver the training are minor in comparison. With CBT there is no need to prepare new materials, hire or train an instructor for each training session, or pay travel expenses or classroom fees to accommodate employee learning needs, so the costs per user remains stable each time the application is used.

Small- and medium-sized companies may find their CBT options are restricted by their budgets. They may be limited to off-the-shelf products or customizable programs and may not be able to afford fully customized programs. But these companies should not rule out CBT until they have considered exactly what their training needs are and have taken a critical look at the potential benefits.

CBT is available anytime you need it. It can be delivered on demand, putting you and your employees in control of your own time and learning processes. It also provides a consistent presentation of learning materials, exposing every user in every training session to the same learning environment and quality of information. A good CBT application will also allow you to measure the return on your training investment through tests or other feedback mechanisms. Or, if you are like Newbridge Networks Corp., you get right down to the bottom line to determine what CBT can do for your company.

Measuring the benefits of CBT

Training is a high priority at Newbridge, and the company decided to measure this considerable investment in its employees. Newbridge determined that each employee contributes, on average, almost $300 worth of goods for every hour on the job. Conversely, every hour an employee is off the job for training, the company lost the same amount.

Newbridge adopted CBT for some of its technical training and discovered employees were learning more in less time. And to Newbridge, less training time means more productive time. The company expects to recover the upfront expense of implementing the CBT in two years. Still, not all businesses are as quick to jump on the CBT bandwagon.

Computer-based training has been a slow

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Gemini: sharing a love of learning

Astrologists claim Gemini, the sign of the twins, loves learning and sharing ideas. That's definitely the case for Gemini Learning Systems Inc., a computer-based training (CBT) developer in Calgary. The company takes a twin approach to success: adaptive and high-quality learning mixed with technology standardization.

Gemini Learning Systems is the developer of SWIFT (SoftWare Intelligent Freeform Training) which, according to the company's president, Kim Adolphe, "is the only CBT development tool in the world that provides an adaptive learning environment (ALE) and implements SGML (standard generalized markup language), an ISO standard."

Adds Adolphe: "We're developing a software application for CBT. We're not using other authoring tools to build CBT."

The SWIFT solution promises a new approach to the creation of interactive CBT. As an authoring tool and learning environment, it is an intelligent tutoring system that provides guidance to learners based on their location, history, and current level of knowledge of a topic.

All of the courses developed in SWIFT have the same browser-like interface so learners spend more time studying the topic, rather than getting bogged down trying to navigate the interface.

Adolphe adds that it was important to Gemini to develop a product that "ensured that all the features were there to make the content developers' job easy, but also provide them with everything they need to make a sound course from an instructional design and pedagogy standpoint."

Only content is required to create effective distance education and training courses in SWIFT that can be delivered over the Internet, a company intranet, or on a CD-ROM in any language.

Gemini says SWIFT incorporates a three-level hierarchy that promotes effective instructional design and contains unique elements including feedback from learners, mastery scores, question pools, short answer questions, and supplemental instruction.

Multimedia objects such as graphics, video clips, sound files, as well as external applications to be launched, can be linked to any SWIFT course.

Gemini started in 1991 with a strong commitment to advanced research and development and it shows through its joint ventures. It is the lead contractor in a CBT research development project with the Centre for Information Technology Innovation (CITI) in Quebec, Simon Fraser University in B.C., PRIOR Data Sciences (an affiliate of SPAR Aerospace) in Ontario, and the University of Alberta.

Says Adolphe: "we dedicate significant resources to R&D [research and development] to enhance our SWIFT technology. Our R&D joint ventures are with government research bodies, educational institutions, and private enterprises nationally and internationally."

Gemini has also partnered with many content providers to ensure their courses are available to a wide range of professionals and tradespeople, including courses in electricity and crane operation.

—Michelle Schoffro & Curtis Cook

but steady sell for small and medium-sized businesses in Canada. The industry is very young: most of the companies are less than 10 years old and are small in terms of sales and number of employees. And while the industry is in a growth stage, those veterans who have survived have faced an uphill battle. Like any business with a new technology or product, CBT developers had to create an awareness among potential users that the new technology was effective, efficient and the best use of training resources.

However, the huge growth in Internet use in the last couple of years has been instrumental in familiarizing people with working and learning with computers and online. "People are just now becoming more comfortable with [the Internet]," says Kim Adolphe, president of Gemini Learning Systems Inc. in Calgary. As that happens, they open up to the concept of learning via technology. Adolphe has seen many CBT companies fail since she founded Gemini in 1991, and she has watched the painfully slow change that has occurred in the market for CBT products. It's still a struggle.

Openness to computer-based training has been predominantly in any industry or business sector with a high level of existing technology and technological skill within the workforce, as well as a history of recognizing the value of training its employees. A recent Industry Canada study pointed to the health services, banking, environmental, printing and publishing, and electrical and telecom-

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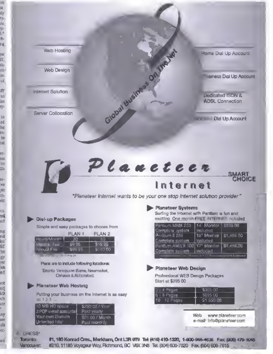

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Heterogeneity a fact of network life

LAN LINE

ISSIE RABINOVITCH

I hope I made a convincing argument on behalf of Fast Ethernet in my November column (viewable online at http://www.tcp.ca). In the case of a new local access network (LAN), it's a simple decision to choose Fast Ethernet over Ethernet as the somewhat higher cost is offset by the dramatic performance boost. In the more common scenario, where a substantial investment in 10 Mbps Ethernet has already been made the choices are more complex.

This is largely due to a single fact networks don't have to be homogeneous. Using network hardware like switches and hubs it is possible to mix and match different cable types and different kinds of NICs (network interface cards)—such as 10Base 2, 10Base-T, Fast Ethernet, and Token Ring—on the same network. It is possible to upgrade a network, while taking the first step in a migration to Fast Ethernet, without trashing what is already in place.

Depending on actual habits and needs, 10 Mbps can be inadequate for as few as three users, even if only mainstream business applications are being used

My own test network started off very small: two computers with 10Base-2 cards connected with 3 m (10 ft) of thin coax cable. By the time it had grown to four computers, I was more interested in 10Base T, but rather than replacing what I had I built on it. I bought an eight-port 10Base-T hub with a BNC port, connected my coax segment to this port, and my newer computers (with auto-sensing 10/100 Ethernet cards) to one of the other eight ports.

With additional hubs, this could become a very large network. Unfortunately, unless the architecture was changed, users would continue to share the same 10 Mbps of bandwidth. Although I visit offices with 30 and more users that are quite happy sharing 10 Mbps, many modern applications are bandwidth intensive. Depending on actual habits and needs, 10 Mbps can be inadequate for as few as three users, even if only mainstream business applications are being used. It doesn't require desktop videoconferencing to make your network bandwidth-hungry.

Switches are a very good way of improving the efficiency of networks and adding bandwidth. Switches can have as few as two ports, and as many as 24 (or more). Ports can be 10 Mbps, 100 Mbps, or 10/100. Dual-speed ports can be configured to operate at either speed. The most convenient and useful ports are the auto-sensing 10/100 variety, which do exactly what the name implies.

Switches segment traffic on one port from traffic on the others, which has many benefits. It's possible to connect users directly to a port on a switch, in which case they get dedicated bandwidth. A user connected to a 10 Mbps hub, which is then connected to a port on the switch shares 10 Mbps with the other users on that particular hub. That's still an improvement over sharing the same bandwidth with the entire network. Bandwidth, and the efficiency with which traffic is routed on the LAN, increase in direct proportion to the number of switched ports, but so does the price of the switch.

Let's take a look at two models on the market, and discuss how they might be used. I've found it appropriate to suppress brand names, since we're concentrating on generic capabilities.

Switch 1. This is an eight-port, dual-speed switch with 10 Mbps and 100 Mbps on every port. This can handle a large number of users, since each port can connect to an individual user or a hub. On the other hand, in an office of seven users, each user can be connected directly and receive dedicated bandwidth corresponding to the speed of his/her NIC. Over time, as older computers are retired, more of the ports will be configured at the higher speed, and the total bandwidth of the LAN will increase. To accommodate growth in the number of users, Fast Ethernet hubs can be added. It will be a long time before this switch needs to be replaced.

Switch 2. This has eight 10 Mbps ports and two 10/100 ports. It has an uplink button on the eighth 10 Mbps port and another uplink button to one of the 10/100 ports. These buttons toggle between normal and uplink mode, the latter being used to connect to another hub. One way this could be used is to connect the server or servers to the fast ports, and users to the slow ports, directly or via a hub connection. This model is less expensive than Switch 1, but still gives a boost to performance that will be obvious to everyone. No visits to the desktop are required. This is a speedy and unobtrusive upgrade that is done entirely in the wiring closet. No desktop visits required. ❑

Issie Rabinovitch is a Toronto-based computer consultant and technology journalist. He welcomes comments and questions at irlan@irtechnogroup.com

CBT addresses professional needs

Continued from page 73

munications sectors as the best candidates for the future growth of CBT. Many of these industries experience rapid and continuous change in the products and services they offer, requiring constant skills upgrades.

Still, organizations are hesitant to jump on the CBT bandwagon. This is particularly true of government and educational institutions. Organizational politics and traditional views on training hinder efforts to implement CBT. Many companies and government departments are still trying to support full-blown training departments, including instructors, on ever decreasing budgets. Adolphe relates three main roadblocks Gemini encountered with potential clients even as late as the early 1990s:

- the lack of infrastructure required to support CBT
- the paradigm shift required to move to CBT
- and the need for a fundamental understanding of what CBT meant

Adolphe believes standardization within her industry may help demystify CBT for everyone.

Standard issue

Standardization of the CBT architecture or delivery platform is an increasing concern to many developers and content providers. By creating standard formats for text, graphics, audio, video, animation and simulation, changes in course content can be made at any time by anyone without difficulty. Standardization also becomes a business issue for CBT companies looking to expand overseas to European or other markets where ISO standards may be more widely recognized and implemented, and creating products to ISO standards may be required to conduct business.

This is just one product and design issue CBT companies will need to address as the industry grows. Another is the creation of a truly valuable learning tool. Many companies sacrifice learning techniques and the more educational aspects of content development and rely more heavily on the glamorous technical tools and the programming perspective.

"When multimedia took off three years ago, everyone jumped on that bandwagon as we all know and the majority of them are not around today," says Adolphe. "They were only doing the multimedia part and the glitz, and they weren't thinking about the effectiveness and the pedagogy and the instructional design."

She adds that they didn't consider "how important the content is: they were more interested in the entertainment end of it." The result is a poorly designed product that has bells and whistles yet ends up being more frustrating than helpful.

Clearly CBT is not the be all and end all of training, and most CBT developers will admit there are training areas—certain human and managerial skills for example—that probably benefit from more traditional methods. But when it is designed thoughtfully it is a powerful training tool. According to Adolphe, effective CBT incorporates many different learning principles. She states that "90 percent of an interface should already be familiar to the user [because] it's very important that the learner concentrates on the content and doesn't spend all their time trying to learn yet another new interface."

The software should provide feedback that's specific to the learner's interactions. It should provide a large variety of question types, not just be limited to true and false or multiple choice. There should be short answers, graphical tests, matching or other questions. Adolphe suggests that the best content for any type of learning tends to be in a three-tier hierarchy, which simply means that there are three different levels of content, possibly Topic, Module, and Concept. There should also be examples and supplemental instruction that lead people on to more information. Concepts need to be provided in different ways to accommodate different learning styles. And the whole thing must be adaptive to each individual's learning strengths and weaknesses.

Learning is not simple. There are so many variables that can reduce its effectiveness, and that costs a company when it is training people to help them grow and to help your business grow. CBT gives you an opportunity to reduce those variables and to create an interactive learning environment available on demand. In the knowledge based economy of the future, this may be your company's greatest asset. So, as you enter the future of professional development, remember that the old saying still rings true: "Tell me and I'll forget. Teach me and I'll remember. Involve me and I'll learn." ❑

Michele Scheffre & Curtis Cook are international business consultants who can be reached at Global Trade Solutions at 613-234-0538, by email at mjr@gs-global.net or ccook@gs-global.net, or their Web site at http://www.gs-global.net.

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Email vendors seek converts

By Geof Wheelwright

You'd think that with the development of Internet-based email standards the world of messaging would become a little simpler and less confusing. In fact the Net has actually created a far more competitive and thus even more complicated marketplace.

Since Internet protocols allow any email system to talk to any other—and include file attachments formatted text and links to Web and intranet locations within messages—you might think the case for going with a single messaging software supplier has actually been weakened. After all if any email system can talk to any other why not just let people use whatever email package they want to use?

The answer to this question lies in the fact that messaging these days goes far beyond simply handling email. Many messaging systems such as Microsoft Exchange or Lotus Notes, are now actually complete environments in which entire applications are developed, making it a lot harder to simply jump from one email package to another.

You not only use these systems for sending and receiving email, but also for scheduling group meetings, carrying out project management work and managing your database of contacts. And in the case of both Notes and Exchange, there are also a number of corporate resources (such as online discussion groups and share project folders) that are built around these systems and cannot easily be placed elsewhere.

In order to get some perspective on what is happening with each of the two major messaging systems choices in the market we offer the following update on Exchange and Notes.

Microsoft Exchange
While you may associate Microsoft's latest messaging efforts more closely with Outlook, the reality is that Outlook is really only the "client" software that allows you to access Microsoft Exchange which is the "business end" of this particular horse.

There have been a lot of developments around Exchange in the past year. At a major Exchange conference in Boston in mid-September, Microsoft unveiled the results of a survey by Giga Information Group that would seem to boost the fortunes of Exchange. Microsoft says the survey showed that large organizations can substantially boost their return on investment by switching from "legacy messaging systems" (i.e., those produced by its competitors) to Microsoft Exchange Server.

Microsoft said a survey of 26 large organizations conducted by Giga found that migrating to Exchange Server from legacy mail environments such as Lotus cc:Mail and Microsoft Mail, provides companies with average annual savings of US$2,393 per employee. Microsoft suggested that the savings were due to lower budgeted costs, lower indirect costs associated with downtime less need for end-user peer support and employee productivity gains.

Microsoft also announced the availability of a free suite of tools that make it easier to migrate from cc:Mail and Lotus Notes to Exchange. The tools, which can be downloaded from Microsoft's Web site (http://www.microsoft.com) are supposed to make it faster and cheaper for users to move from cc:Mail and Lotus Notes to Exchange.

Lotus Notes/cc:Mail
At its European conference in Berlin in September, Lotus announced a new promotion that it hopes will encourage users of competing messaging products to move to Lotus Notes and the company's Domino server product.

Lotus has extended its Trade Up to Lotus Messaging to customers with licences for products such as Microsoft Mail Microsoft Exchange, Novell Groupwise, Banyan Mail Netscape Mail HP OpenMail, Eudora Pro DaVinci eMail, MEMO from Vermation Digital ALL-IN-1 and Exec2/TAO from Fischer International. Lotus says all these users can now upgrade to the Lotus Messaging Licence at a discount of around 30 percent.

The company suggests Lotus Messaging Licence, combined with the previously announced Lotus Passport Advantage Messaging Software Subscription provides a "complete solution to enable cc:Mail customers with mixed messaging environments to move all users to Notes and Domino at their own pace. In addition, the company says customers who hold paid licences for qualified messaging products are eligible to purchase upgrades to the Lotus Messaging Licence which is available through the Lotus.

Lotus explains that the Messaging Licence is a new offering that entitles customers to use cc:Mail or the Notes client licensed for messaging. It also includes a Domino Mailbox CAL which gives users access to the industry leading Domino Mail Server. Features available on the Domino Mail Server with the Domino Mailbox CAL include email and Web mail, calendaring and scheduling, agents for filtering and archiver and discussion databases including Web discussion forums.

Trade Up to Lotus Messaging became available on Oct. 5 and is valid through Dec. 31 1998. Customers with users who have "paid for" messaging products already installed can trade-up to the Lotus Messaging Licence with Software Subscription for US$24 per seat. This price includes the right to upgrade to future versions of Lotus messaging clients during the first year ❑

Electric Mail Co. thrives on solving other people's email hassles

By Geof Wheelwright

Running a corporate email system is a task that some large firms just don't want to do. They would rather farm out the job. And that simple fact has been a huge boon for a Vancouver based corporate-email outsourcing organization called The Electric Mail Company Inc.

In the space of four years Electric Mail has become a successful Internet messaging specialist and counts a number of household names amongst its customer base including Panasonic Delta Hotels and Resorts, Fujifilm Canada, Alliance Communications and Ballard Power.

The company recently announced that its flagship Electric InterConnect service is now compatible with a number of major LAN-based email systems such as Lotus Notes cc:Mail Microsoft Mail, Microsoft Exchange and Novell GroupWise systems. Electric InterConnect offers global corporate email connectivity with no long-distance or toll-free number fees and can operate with or without dedicated Internet access.

To use the service while travelling, you simply dial a local number with your modem to gain an Internet connection and use Electric InterConnect to connect to single or multiple email systems.

According to Eric Arnum editor of industry newsletter *Electronic Mail and Messaging Systems* (EMMS), these features give Electric Mail good international coverage and access for corporate email a[illegible]

"These five products [Lotus Notes, cc:Mail, Microsoft [illegible] Microsoft Exchange and Novell GroupWise] together [illegible] almost 46 percent of all installed corporate mailboxes, and [illegible] than 90 percent of the new purchases made this year," he says.

"Many companies are faced with the daunting task of managing mixed environments that include two or three of these five. Given this situation the ability to link any and all of the leading LAN-based mail systems to the Internet with one service could be [illegible] valuable to enterprise IS managers."

That view was echoed by one of Electric Mail's largest customers Fujifilm Canada. Carey True director of Fujifilm Canada says outsourcing email can eliminate a lot of hassle. "Zero administration is the greatest thing about using a service like Electric InterConnect, and we also realize a substantial financial advantage," says True. "Getting stable reliable Internet messaging without the investment or administrative overhead of managing an Internet connection is a great combination in my book."

Electric Mail charges approximately $160 per month for 20 users plus an initial setup fee. Electric InterConnect service requires a dedicated Windows 95 or NT system on the LAN and supports either a modem or dedicated Internet connection. The company also offers "E-mmunity" an anti-virus service that pledges to stop virus infected email attachments before they reach a client's network. ❑

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Needed: single view for e-messages

Online newsletter subscriptions, letters from friends, business correspondence and the always-dreaded "spam" flood into your email inbox every day. And that's on top of the more conventional deluge of incoming faxes, "snail mail" letters, voicemail and pager messages.

By Geof Wheelwright

We live in a connected society, but it sometimes seems that we have become so connected we are in danger of disconnecting from the meaning, sense or relative importance of any individual message or piece of communication. And that's why it has become more important than ever that we use the very technology that allows us to receive so many messages to take control of those messages before they take control of us.

A single view

One of the great problems facing users of fax, voicemail and email is that they all "reside" in different places. Just the simple act of checking whether you have voicemail, faxes or email can require three distinct actions on your part.

To combat that problem, software developers over the last several years have promoted the idea that you should try and maintain a "single view" of your all incoming messages that could be sorted, searched and managed easily and consistently. The first widespread solution for doing this came with the inclusion in Windows 95 of Microsoft's Exchange "client" software for handling incoming and outgoing faxes and email messages.

Although this bundled Exchange client was somewhat hard to use, had poor Internet mail connectivity and quite limited fax handling capabilities, it was the first major commitment to put all those message-handling capabilities into one place.

By this time, other companies began to see the potential of an "all-in-one" approach.

One of the most significant developments in this area was by Symantec, which had launched a version of its WinFax, fax send and receive software that could be integrated with Exchange. Included with this product was an application called TalkWorks that also allowed you to run a PC based telephone answering system that would store messages on your disk.

Again, this was an innovative solution but somewhat limited in what it could achieve. In addition, it wasn't ideal for use in a corporate environment where dedicated fax and voicemail systems were not integrated with the PC.

The flip side of this issue was that having message sources spread out over several different technologies and devices could be something of a safety measure for corporations. If you move all of your voicemail, email and fax communications to being something that "lives" on the LAN, then two things happen.

The first is that the volume of data traffic over the LAN can increase dramatically when you start moving voice and fax information around it—a serious issue if you are "bandwidth-challenged." Secondly, if you move all your fax and voicemail functions to the LAN and it fails at any time, you will have lost all messaging systems.

At any rate, there are a number of tools now available that will help you take a more consistent and managed approach to message handling. ❑

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The pros and cons of extending credit

SOHO

DOUGLAS GRAY

Most businesses rely on credit. Credit is either being extended to customers or being obtained from suppliers. In most businesses credit flows in both directions.

For many businesses, extending credit is necessary to remain competitive and to grow. The small business owner who sells on credit will have a higher sales volume than one who sells on a cash-only basis. Of course, there are advantages and disadvantages to extending credit, and you will have to evaluate these in your own situation to determine whether the advantages of offering credit are greater than the disadvantages.

Advantages

Briefly, here are some of the advantages:

- **Increased ability to compete with larger businesses.** It is a natural tendency for people to shop around for the best bargains. Many people who buy on credit limit their shopping to larger stores that give them credit. Unless you grant credit or accept credit cards, you could lose out on potential sales, regardless of the type of product you have or even though you sell them at a lower price than a larger store.
- **Meeting or beating competitors.** If your credit terms are more attractive in terms of a lower interest rate, higher limits, or easier access to credit than your competitors, these factors alone could provide you with the competitive edge.
- **Accessing a larger customer base.** Estimates show that between 65 percent and 75 percent of shoppers utilize credit to make purchases. Therefore, if you offer credit or accept credit cards, you are going to extend the size of your customer base. Otherwise, you will be limiting your sales to people who are willing and can afford to pay cash.
- **Larger amount of customer sales.** The offering of credit increases the size of the average sale. Customers with credit extended to them tend to purchase a greater amount per purchase, and are more responsive to sales and displays.
- **Orders by telephone.** Credit makes it easier and more convenient for customers to purchase over the phone.

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- **Goodwill for your business:** Customers are more appreciative when they can buy goods with the convenience of credit. It builds customer loyalty.
- **Additional profit on financing:** Some businesses charge a financing fee that can range between five and 15 percent higher than the conventional financing charge that one would pay at a bank through a consumer loan or a consumer line of credit.
- **Utilization of credit information as a sales and promotion tool.** By analyzing the information contained on your customer's accounts, you would be able to obtain a profile of their purchase preferences, buying habits, times of purchase and overall buying trends. This information could be utilized for sales promotions or advertising purposes, as well as direct mail.

Disadvantages

Extending credit obviously involves disadvantages such as additional expense and risk of a bad debt, as well as other indirect and direct costs. Some of the disadvantages are as follows:

- **Reduced working capital.** If your customers are slow in paying, your working capital is reduced. Interest charges on your line of credit would reduce your overall profit.
- **Increased administration costs.** There can be considerable operating and overhead costs associated with extending credit, such as the cost of credit investigations, bookkeeping, mailing out invoices and statements. Maintaining records by computer system can be efficient but expensive in terms of the capital costs of the equipment (the hardware and software) as well as the training and salary of an operator.
- **Higher return of goods:** Studies show that there are a higher percentage of returns with credit sales than goods sold on a cash basis. Frequently people buy first and decide later whether they really want to keep the items. If not, they are returned, sometimes many months after the goods were purchased. This could result in a loss to you, as returned items may not be resalable or could be out of season.
- **Bad debt loss:** Statistics show that despite the thoroughness of your credit application and your screening process, you are going to have a certain percentage of customers who are unable or unwilling to pay the amount they owe. Naturally, any bad debts that have to be written off will increase your operating expenses and reduce your profitability.

There are many costs associated directly and indirectly with offering credit. These expenses would have to be deducted from any income you receive from your customer. Such expenses could include the cost of capital to finance the credit, personnel, equipment, supplies, professional advice, credit and collection agency fees or commissions and, of course, bad debts. ❑

Douglas Gray LL.B. is a Vancouver based expert on small business. He is the author of 17 bestselling business books, including *The Complete Canadian Small Business Guide* (McGraw-Hill Ryerson), *Start and Run a Profitable Business Using Your Computer* and *Start and Run a Profitable Consulting Business* (Self-Counsel Press).

ABC News country profiles

NB—The ABC News Web site offers a complete section of country profiles. Each takes information from the CIA's World Factbook, a color map of each country, a brief narrative introducing topics ranging from the country's history to its politics, from its natural resources to its cultural riches. There is also political information including each country's national anthem in RealAudio.
http://www.abcnews.com/reference/countries/index.html

IMF World Economic Outlook

NB—As the world's economy continues on an uncertain road, the International Monetary Fund has published its *World Economic Outlook* (WEO). The document, which is available online in Adobe PDF format, is published semi-annually and highlights monetary policy issues in emerging markets and Asia, issues facing Japan and Europe and responses to the crisis.
http://www.imf.org/external/pubs/ft/weo/weo1098/index.htm

CNN—Cold War

NB—CNN's major documentary series on the Cold War has a home on CNN Interactive. The site includes an episode by episode guide to the major series and several resources associated to the series. You can also visit message boards and discuss the program and issues raised.
http://www.cnn.com/SPECIALS/cold.war/

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Overseas phone adventures

ON THE GO

GEOF WHEELWRIGHT

In a nation of 125 million people you can get lost pretty easily especially if you are functionally illiterate. At least that's how I felt in Japan last month as *TCP* associate editor, Jeff Evans and I joined several other Canadian technology journalists on a trip to see the latest gadgets from consumer electronics giant Sony.

To ensure that I wasn't completely lost however I took along a little insurance—a Japanese digital mobile phone that allowed me to stay in touch with loved ones and key businesses in Canada. The phone came from a company in Canada called Rent Express, which specializes in renting mobile phones to business travelers for use in countries all over the world. Rent Express has found a useful niche because there are only a limited number of countries where you can use a standard Canadian mobile phone—and Japan is not on that list.

I had done this once before on a trip to France in June where Rent Express provided the phone and I was able to charge all calls to my Canadian Fido mobile telephone account. The phone rental was around $70 per week (excluding call charges which were billed to Fido). As it happens Fido has no "roaming" agreement in Japan so I arranged with Rent Express to bill charges to my credit card at the rate of $1.95 per minute for local outgoing calls made in Tokyo. All incoming calls were free.

Needless to say, this allowed me to liberally give out the mobile phone number to those I thought might need to get in touch with me while I was away (with the proviso that they would be paying the cost of a regular call to Tokyo). I made most of my outgoing calls from my hotel room using a calling card although it was comforting to know that I could make calling card calls on the Japanese phone and it was not going to cost me more than $1.95 per minute. As I was planning to visit a friend who lives in Japan's largest city it was also useful to be able to give him a "local" number so he could call me at any time.

Despite all the contingency planning, I actually did not make a huge number of calls in Japan and I had no more than a dozen incoming calls. The line quality on those calls was also variable but after touring Tokyo's Akihabara district (known as Electric City) I quickly learned why. Mobile phones are so cheap and so widely available in Japan that they were being sold from sidewalk stalls in the same way books, CDs, or cheap videogames might be sold in Canada. They were real commodity items and almost everyone seemed to have one.

> Mobile phones are so cheap and so widely available in Japan that they were being sold from sidewalk stalls in the same way books, CDs, or cheap videogames might be sold in Canada

Given this kind of demand on Japan's wireless telecommunications network I was not surprised that line quality was a little worse than I was used to on a digital phone.

The phone itself was quite impressive. It was incredibly light and required only one battery recharge in the entire five days I was in Japan. It provided all the same features I was used to on my Canadian digital PCS phone (with the exception of voice mail and the SMS messaging system) and worked whenever I needed it. And for less than $100, it was a great insurance policy to make sure I was available when I was needed.

Of course, I also made extensive use of

Continued on page 86

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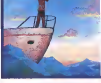

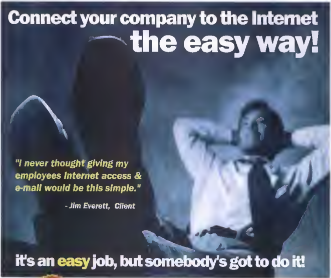
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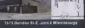

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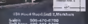

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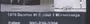

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Overseas phone adventures

Continued from page 82

email during this trip and regularly used pcAnywhere to dial into the desktop PC in my home office to see what faxes had come in—as well as check email accounts that I couldn't get to from my notebook computer. I also used pcAnywhere to send a digital photo of my visit to my friend's house outside Tokyo to my wife and children.

I did find there were some problems in establishing a local Internet connection from my hotel room. But that appears to have been more of a difficulty with the way the hotel phone system interacted with my modem than with any inherent incompatibility between my Toshiba notebook (which after all likely started its life in Japan) and the Japanese telecommunications system. When I used the phone line at my friend's house, it was simple to connect to the Internet via a local phone call to the Microsoft Network access number in Tokyo. I was told that a special "adapter" was needed to get the hotel room phone line working with the modem, but even after acquiring the adapter I could not get it to work.

At any rate, I can certainly recommend renting a mobile phone if you are traveling to Japan on business. However, before leaving for Japan, you may want to ask the hotel if you will have a way to connect your notebook computer modem to the hotel phone line. Otherwise, you'll end up doing what I did—dialing into a Vancouver-based Internet "node" to check email. I'm sure the resulting charges are going to give me quite a fright when my phone bill arrives. But that's another Halloween horror story ❑

Art Walker Project
NB—This Web site brings the work of scenic and landscape artists into the digital age, allowing Web surfing art fans to explore locations from around the world, including landscapes, cities, college campuses and other environments—all through the timeless wonder of fine art. A map on the main page serves as a starting point for your voyage around the world.
http://www.artwalker.com

Wright Flyer online
NB—This NASA educational Web site permits Internet users to conduct real-time science. NASA scientists have built a full-scale model of the 1903 Wright Flyer and are now studying wind flows to make sure the flying replica they are planning to build will be safe. More information is available on the site.
http://quest.arc.nasa.gov/aero/wright

Japanese golf course guide
NB—If you're in Tokyo, or traveling there, and you feel the need to hit a few golf balls, you'll be glad to look here first. It's an English language directory of golf courses in and around Tokyo that are always open and always welcome non-Japanese players. Nearly 90 Tokyo-area courses that are open to non Japanese are listed.
http://www.japangolfcourse.com/hotta.htm

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In brief

Continued from page 69

videoconferencing products with the addition of V.35 capabilities, a videoconferencing system capability with private communication networks. This enhancement helps those who demand the quality of high-speed, high-bandwidth video connections but who do not have access to ISDN connections in their country of operations. It's also for those looking to use excess bandwidth on their existing private networks.

http://www.3m.com

Axent launches NetProwler

ROCKVILLE, Maryland (NB)—Fresh from persuading Dell to sell its Raptor firewall technology with the Dell Internet Server series, Axent Technologies has taken the wraps off its Intruder Alert with NetProwler software.

Intruder Alert technology as the name implies, is a network intrusion detection system. The company says this technology is the first intrusion detection system (IDS) to integrate both network and host-based methods in a single product that automatically detects and responds to external attacks.

Axent says NetProwler is a new network monitoring component for Intruder Alert 3.0, which provides network based intrusion monitoring integrated with Intruder Alert's manager/agent enterprise-class IDS.

Axent says Intruder Alert with NetProwler integrates the three most distinct important layers of protection to stop more than 90 percent of attacks known today. These include a firewall perimeter monitor that protects the outside layer of the network from unwanted outsiders, and an automated IDS software layer that extends across the enterprise.

Intruder Alert monitors the audit trails of distributed systems in real-time for footprints that signal suspicious or unauthorized activity on all major operating systems, Web servers, firewalls, routers, applications, databases and Simple Network Management Protocol (SNMP) traps from other network devices.

http://www.axent.com

BreezeCom offers wireless LAN line

CARLSBAD Calif. (NB)—BreezeCom is shipping its IEEE 802.11-compatible, interoperable wireless networking product line the BreezeNet Pro 11 series.

The BreezeNet Pro 11 line includes access points single- and four-port station adapters, building to-building bridges and PC cards. New BreezeNet products are the SA-PCR and SA-PCD Pro 11 frequency hopping, spread spectrum wireless local area network (LAN) PC Cards. The cards feature a 3 Mbps data rate with automatic fall-back to 2 or 1 Mbps.

The SA PCR offers a retractable antenna system that can transmit data up to 900 m (3,000 ft.) in open space and 180 m (600 ft.) in an office. Both cards are Type II PCMCIA adapters and operate on the unlicensed 2.4 GHz industrial, science and medical band.

The BreezeNet Pro 11 line works with Windows 95, 98, NT, NetWare and Simple Network Management Protocol (SNMP). Pricing for the card is $565.

Phone Doubler ships

NEW YORK (NB)—Ericsson Phone Doubler technology is now commercially available worldwide. Phone Doubler Quick Call (PDQC) is an Internet protocol (IP) telephone system that allows Web users to click on a Web page icon and have an Internet phone call forwarded to a customer call centre.

The idea behind the technology is to make it easier for Web users—as well as firms with Web pages—to call a company's technical or sales support staff. While the user gets as an easy and low-cost option, the company concerned saves on toll-free call costs, and offers international phone support facilities.

Additionally the customer can peruse the firm's Web site to answer at least some of their questions and would be routed across an IP telephony link if they need to talk to a human operator.

The PDQC client software downloads in less than one minute, while the firm says competitive products take as long as 15 minutes and require users to log on and off several times during installation.

The product works with any telephone system, PBX, or call centre system. PDQC also integrates Web-based customer service with call centres to enhance online customer service with the option of simultaneous personal assistance.

http://www.ericsson.se

Ericsson unveils two WAP apps

STOCKHOLM (NB)—After more than a year's gestation, the wireless application protocol (WAP) forum has at long last had a baby in the form of the first WAP systems just unveiled by Ericsson in Sweden.

WAP technology, first announced in June 1997 allows direct interfacing between a TCP/IP communications medium and a cellphone medium regardless of what platform the cellphone system operates on.

Ericsson has been quietly working on the technology for the last year, and just unveiled the WAP Gateway plus a WAP service developers' kit for cellular service and content providers. The new products allow for development of mass market access to Internet services from small-screen mobile phones.

This system will help create applications that provide users of mobile phones and other small-screen handheld PCs with direct access to Internet services.

WAP Forum http://www.wap.org

Say hello to v-commerce

NEW YORK (NB)—Nuance Communications announced it teamed with via World Network to integrate the Nuance 6 speech recognition technology into via Voice, which is billed as the travel industry's leading speech recognition application.

Parallel with the move, via World Network announced it is joining the V-Commerce Alliance, a group of technology vendors and systems integrators working with Nuance to make it easier to build and deploy voice commerce (v-commerce) applications.

One step up from e-commerce, v-commerce will allow users to employ natural language speech recognition to perform self-service transactions over the telephone and other connected devices. While the adoption of Internet e-commerce continues to grow, v-commerce is the next logical step in the evolution of traveler convenience.

According to company officials, via World Network integrated Nuance 6 into its voice application in August and plans to deploy its latest via Voice technology using Nuance 6 for a major North American airline.

Via World Network says Via Voice, which has been in use by business travelers since November of 1996, is the travel industry's only fully deployed speech recognition application that books airline, car rental and hotel reservations.

Continued on page 89

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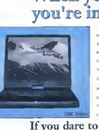

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In brief

Continued from page 87

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Intel extends StrongArm to HPCs

SANTA CLARA Calif (NB)—Chip builder Intel Corp is shipping a new 190 MHz StrongArm microprocessor and companion chip designed for use in handheld computing devices.

Vendors including Hewlett-Packard are already planning to use the SA-1100 and SA-1101 companion chips in new mobile PCs. Intel said it is expecting strong growth in the handheld sector—up to 14 1 million units worldwide in 2002 from 4.6 million in 1998

According to Intel the SA-1101 companion chip, used with the SA 1100 processor can provide power savings and performance increases that translate into longer battery life and faster speeds for end users. The company said the products also offer compact design enabling creation of lighter devices.

http://www.intel.com

Modem functions when PC is off

ALLENTOWN Penn. (NB)—Voice mail through a modem seems like a great idea to many users until they realise it stops working when the PC is turned off Now the Lucent Technologies Microelectronics Group has announced a software upgrade to its Venus modem chipset that will enable high-end functions like digital phone and fax answering even when a PC is turned off

The design is aimed squarely at small office/home office (SOHO) market which is demanding more functionality and flexibility from modem based PC applications with out having to leave PCs perpetually turned on

Lucent puts the upgrade portion of that market at about 20 million users annually—buyers who want greater modem speed or more modem-based functionality

The first modems to use the new Venus chipset software will be made by Multi Tech Systems Hayes Kortex and Paradise Innovations.

http://www.lucent.com/micro/WildWire
http://www.lucent.com/micro/K56flex.

Remote access Plug and Play

WESTWOOD Mass (NB)—Providing remote dial-up access to multiple users over a limited number of phone or ISDN lines can be a challenge. Mapletree Networks has announced the Mapletree Networks 3000 Series hardware and software remote access product for Windows NT

Mapletree Networks 3000 consists of one or more V.90 or K56Flex modem cards, a PRI (primary rate) or BRI (basic rate) ISDN (integrated services digital network) card and Windows NT 4.0 drivers and software The initial Model 3024 product has 24 ISDN/V.90/K56 ports, and is priced at US$7 695

Windows CE Pro adds OEM support

REDMOND Wash (NB)—Microsoft Corp is shipping Windows CE Handheld PC Professional Edition to its vendor partners. The company reported that manufacturers are already installing the operating system for mobile computers and that over 40 software and hardware vendors have already announced support for the platform.

The developer said its third generation of software for handheld PCs has been shipped to 12 OEMs Microsoft said these OEMs were plan

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ning to deliver new computers in stores later this year with widespread availability in 1999

Formerly code-named Jupiter the software is based on the Windows CE 2.11 operating system and improves remote access and connectivity to corporate data while providing the familiarity of Windows. The Pro Edition software also enables new hardware differentiation

The new software has a plethora of improved features including new hardware support options for touch type keyboards, USB connectivity, extended battery life alternative pointing devices (touchscreen and mouse) and additional processors. It also offers a new email client, Microsoft Pocket Outlook.

This email system supports rich Internet standards thereby allowing direct email access to Microsoft Exchange and other servers that support Internet standards, hierarchical folders that are synchronized with the server Internet standard address resolution on-device conversion of attachments; and the ability to store email attachments to external storage cards

http://www.microsoft.com/windowsce/

HackerShield application unveiled

FRAMINGHAM Mass (NB)—Netect has taken the wraps off HackerShield for Windows NT The software is an antihacker application billed as being able to find and close security holes on PC servers

Netect says the software gives non security experts the ability to safeguard a company's systems, servers and corporate data from hacker attacks. Unlike firewalls that simply erect barriers on the network HackerShield protects against internal and external hackers by actively identifying both operating system and network-level security holes on all network devices, according to the company

In use, the software generates easy-to-read HTML reports that alert system administrators to security holes identifies where they are on the Internet, and indicates how to fix them

One interesting feature of HackerShield is that it offers a database of known hacker techniques and stored security checks. This database is automatically updated New security checks and fixes are delivered directly to the user through secure push technology

HackerShield for Windows NT is available for US$695 per server Plans call for Solaris, Windows 95 and Unix agent versions to ship early next year

http://www.netect.com

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NetWare 4.2 in beta testing

PROVO Utah (NB)—Networking giant Novell has announced open beta testing of version 4.2 of its NetWare for Small Business networking software

The company says that version 4.2 is Year 2000-ready, and comes in a licensing scheme that enables organizations to add up to 50 users, one at a time Version 4.2 includes a new Internet Connection Wizard that automates the process of connecting a small business network to the Internet

NetWare for Small Business 4.2 includes the company's NetWare 5 server operating system, and uses Novell Directory Services (NDS) to provide a single point of administration

Users can take part in open beta testing by going to http://www.novell.com/smallbiz. Beta testers report issues at http://support.novell.com/ beta/authorized The part number is 954046 Version 4.2 is set to ship in the fourth quarter Pricing has not been set

Sun shines on Net-connected devices

PALO ALTO Calif (NB)—Sun Microsystems Inc. said it will bring to market a new software technology that will help IT managers and ISPs to bring Internet-based applications to non-traditional devices.

With the Sun Net Strategy, IT managers and ISPs can bring virtually all that is normally available to end users on corporate intranets including digital-based information applications, internal Web sites and network services

Sun also said its purchase of i-Planet Inc. would help it in its Webtop access efforts. i-Planet's RemotePassage secure remote access software will provide encrypted tunneling over the Internet. Sun did not release financial terms of its buyout of i-Planet Inc a privately held company that specialized in secure Internet communications products. i-Planet uses Java-based enterprise networking products for remote access to intranets

The software can access files or applications running on Solaris, Windows NT Novell, IBM AS400/3270 systems, and any Unix-based file systems.

http://www.sun.com
http://www.i-planet.com

Tape drive for small businesses

HONG KONG (NB)—Tandberg Data says its newest addition to the company's Travan Network series product line is the Tandberg NS20 Pro a tape drive with capacities up to 20 GB and transfer rates up to 7.2 GB per hour

The product is ideal for cost-conscious entry level, small business server (SBS) applications Actual units are now shipping

The Tandberg NS20 Pro features read, write and level 10 ECC data recording format to insure increased data integrity Integrated hardware data compression electronics provides a broad range of backup environments.

The drive uses a high performance narrow small computer system interface Type II (SCSI-2) interface and 2 MB data buffer providing direct attachment to today's server platforms. It is reportedly supported by all major software applications

Wireless LAN pay off studied

REDWOOD CITY Calif (NB)—Thinking of getting a wireless LAN but worried about the costs? The Wireless LAN Alliance says in its latest report shows that the payback time on buying a wireless LAN system is just 8.9 months.

In the 100-page-plus report, the alliance says that while the average payback time for LAN installations was 8.9 months 97 percent of respondents said their wireless LANs met or exceeded their expectation in providing them with a competitive advantage

The alliance said that the productivity benefits quantified were found to be 48 percent of the total return on investment—a relatively high figure for technology investment Ninety-two per cent of respondents reported definite economic and business benefits after installation The same percentage of respondents reported plans to continue to deploy wireless LANs in the future

The study was conducted by Tech Research an independent market research firm, on behalf of the alliance Tech says interviews were conducted with 34 U.S companies that had a combined total of 10,000 wireless LAN devices deployed. Customers were selected from five major industry groups healthcare, education manufacturing, retail, and office-automation/financial

An eight page summary of the report can be obtained by emailing Mac Sullivan at mack@wlana.com

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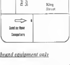

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http://www.homepagenow.com

Wonders of woodworking
NB—Discover the joy of woodworking with this companion site to the PBS how-to program *The Router Workshop*. Read daily woodworking tips, access an episode guide, learn more about the program hosts, and join a discussion forum.
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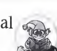

Happy Christmas and a Merry New Year to all you game players and game buyers out there in computerland. Welcome to *The Computer Paper*'s 5th annual gaming guide, where we once again attempt to discern some of the best software titles and hardware devices from the year that was

By Gord Goble

In the grand scheme of things, 1998 may be remembered as the year consumer PC technology finally caught up with the grand dreams of game designers. With the relatively stable Windows 9x operating system forever banishing the mysteries of those dark and incompatible days of DOS, 3D graphic cards accelerating frame rates, and Pentium chips pushing speeds to unprecedented levels, games were generally easy to install, easy to run and danged fast too.

Without further adieu then, get your chestnuts roasting by the open fire, pour yourself a tall warm one and prepare to spend your hard-earned gaming bucks the best way we know how. On Dasher

Action software

Unreal

From: GT Interactive
Tel: 800-610-4847 http://www.gtgames.com
Street price: $60

First person shooter Unreal has been slagged, and justifiably so, for its slow Internet multiplayer play. But the developers, working hard on patches for just such problems, have at least partially rectifying the situation.

That controversy aside, however, Unreal is essentially a "thinking man's Quake," emphasizing monster quality over monster quantity. Hey, these dudes don't just stand there and take a licking, they'll run and hide or turn the tables and hack you down too. Hot graphics and great lighting only add to the winning Unreal experience, though it might be a bit too violent for some.

Forsaken

Continued on page 94

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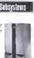

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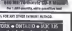

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TCP's 5th annual gaming guide

Continued from page **92**

From Acclaim Entertainment
Tel: 516-656-5000 http://www.forsaken.com
Street price: $60

Part Descent part Extreme Assault and all action, Forsaken is notable even to those who've never played the thing for the mysterious and gorgeous woman featured on nearly every bit of advertising created for the game Unfortunately for those seeking a virtual suitor she has absolutely nothing to do with what's inside the box Fortunately it doesn t matter.

In Forsaken, you'll pilot a freewheeling airborne motorcycle, officially dubbed an "anti-grav pioncycle" through the subterranean caverns of a post-apocalyptic Earth Your mission? Plunder and pillage for all it's worth before your mercenary rivals do the same Lots of shooting, lots of high tech goodies to grab, lots of gorgeous visual and lighting effects and tons of mayhem make Forsaken the thrill-a-second ride of 98

Oddworld: Abe's Oddysee

From GT Interactive
Tel 800-610-4847 http://www.gtgames.com
Street price: $40

Just when you thought you'd seen the last of the side-scrollers, along comes a game like Oddworld. Abe's Oddysee to show you the genre still lives. Bestowed with an actual plot—in itself almost revolutionary—Abe's Oddysee also comes packed with good humor, decent graphics, and a somewhat intelligent speaking lead character. Good fun for the young gamer.

Tomb Raider II

From Eidos Interactive
Tel: 415-693-0297 http://www.eidosinteractive.com
Street price $50

Okay, there's two ways to look at this whole Lara Croft thing: it's great to see a female lead in a computer game; or her ridiculously well-endowed body and none-too-prudish wardrobe are typical of the sexism in modern gaming Whatever your position, she's back in the unimaginatively titled Tomb Raider II, a difficult yet rewarding successor to last year's Tomb Raider. And with cinematic-quality graphics, great puzzles and an intriguing plot Lara s never looked so good

Continued on page ***96***

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C92 REVIEW THE INCLUDED CYBERVISION C92 IS A BIG PLUS -COMPUTER SHOPPER, AUGUST 1997

.EXCEPTIONALLY LOW DOT PITCH OF 0 22MM THE C92 IS AN EXCEPTION TEXT WAS EASY TO READ, GRAPHICS WERE GOOD, AND THERE WAS A LOT MORE SCREEN REAL ESTATE -PC TODAY, MAY 1998

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DECEMBER 98

PRIZE:

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TCP's 5th annual gaming guide

Continued from page 94

Sports titles

Dethkarz

From: GT Interactive
Tel: 800-610-4847 http://www.gtgames.com
Street price: N/A

The Australian produced Dethkarz is still waiting in the wings as of this writing, but I have seen the preview copy and it is good. When released (sometime before December) expect to see one of the slickest arcade racing games ever concocted. Featuring extremely stable, detailed and beautifully lit environments, Dethkarz is no slouch in the vehicle physics department either and will surely be a big hit for the virtual drivers in the family.

Ultimate Race Pro

From: Microprose
Tel: 800-885-GAME http://www.microprose.com
Street price: $50

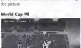
Ultimate Race Pro kinda sneaked up on people when it was released this past spring. But the lack of pre-release press didn't prevent it from being a driving simulation/arcade wonder. Let's face it: driving an only slightly fanciful stock car through a wide variety of environments chock full of visual treats can be very compelling, especially when said stocker can powerslide like there's no tomorrow. And if single player racing wasn't enough, Internet multiplayer competition proved fast and addictive. A great game that just hasn't had the credit it deserves.

Need For Speed III: Hot Pursuit

From: Electronic Arts
Tel: 800-245-4525, http://www.easports.com
Street price: $60

It was a good year for arcade driving games, and the venerable Need For Speed franchise chipped in with its latest incarnation, Need For Speed III: Hot Pursuit. This time around, NFS became gritty and more realistic than ever. Imagine driving the beast that is the Mercedes CLK-GTR at 320 km/h down an otherwise quiet country thoroughfare, leaves blowing in the wind and engine absolutely howling. Now imagine five other high-end sports cars battling with you every step of the way and the flashing lights of a Corvette patrol car in your rear view mirror. You've got the picture.

World Cup 98



From: Electronic Arts
Tel: 800-245-4525, http://www.easports.com
Street price: $50

If you happen to own EA Sports' previous soccer game FIFA: Road to The World Cup, I can say two things: 1) you've got a great game there, and 2) you probably don't need this very mild upgrade. If you don't, however, World Cup 98 is an absolutely superb PC sports game that you must own, even if you don't get a kick out of soccer in real life. Gameplay is fluid and believable, the players capable of an incredible array of moves, and the managerial options are unparalleled. And the look? Well, it's an EA Sports product. 'Nuff said.

NHL 99

From: Electronic Arts
Tel: 800-245-4525 http://www.easports.com
Street price: $60

Like its FIFA soccer series, EA Sports continues to score big with its NHL line of hockey simulations. NHL 99 is no exception, offering a slower, more authentic feel and better artificial intelligence than ever before. Sure, you get the feeling EA released the thing a bit early—the normally stupendous graphics look a bit out of perspective from tight camera angles and commentary can be slightly out of whack—but with a complete show unmatched in any other sports game and new and improved AI, NHL 99 is the best PC hockey yet.

Motocross Madness

From: Microsoft
Tel: 800-426-9400 http://www.microsoft.com/games/
Street price: $60

For Motocross Madness, Microsoft built a gigantic 3D world that covers virtually every form of bike racing known to man, invented a wild yet moderately reality-based motorcycle physics model, and ended up with a game that's absurdly exciting. And racing's only part of it. Pure exploration is another, but my favorite part is the stunt competition, where extreme tricks are the name of the game and big-time airtime is rampant. Especially invigorating when played through Microsoft's Sidewinder Freestyle Pro game controller.

Jack Nicklaus 5

From: Accolade
Tel: 800 245 7744 http://www.accolade.com
Street price: $50

What do you want from a golf simulation?

Continued on page 98

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TCP's 5th annual gaming guide
Continued from page **96**

Believable ball action? Authentic graphics? Real courses? How about a course-building utility that'll let you play in virtually any setting you can dream up? Jack Nicklaus 5 has it all and is one of the best golf games ever.

NBA Live 98
From: Electronic Arts
Tel. 800-245-4525 http://www.easports.com
Street price: $50

NBA Live 99 should be on the shelves by the time you're ready to hit the stores this season, but in the meantime I can tell you that its immediate predecessor NBA Live 98, is widely regarded as the best basketball on a PC. Sporting better control and more play options and player moves than the already top-of-the-genre NBA Live 97, there is currently no worthy challenger in basketball-land

Sims & space

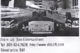
Grand Prix Legends

From: Sierra On-Line
Tel. 800-757 7707 http://www.sierrasports.com
Street price: $80

Grand Prix Legends designer Papyrus Design Group has a history of building the toughest, most brutally realistic racing games you'd ever want to drive. But none of its simulations, not last year's NASCAR Racing 2 or 1996's IndyCar Racing II, can prepare you for Papyrus's ultra authentic look at Grand Prix racing back in those oh-so-dangerous days of the mid-1960s.

Recommended only for those who want to spend hours, perhaps days or weeks, learning how to drive one of these things accident-free, GPL is truly a revolutionary look at PC driving games. Do you have the skill and the patience? If so, the rewards are multifold.

F1 Racing Simulation



From: Ubi Soft Entertainment
Tel. 800-824-7638 http://www.ubisoft.com
Street price: $50

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C't magazine, the most prestigious magazine in Germany tells you the facts: MSI [illegible] and [illegible] the best performance [illegible] Again, *Tom's hardware guide highlights the facts:* MSI's M/B [illegible] great performance, good [illegible] great stability, good features, and reason- [illegible]

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TCP's 5th annual gaming guide

Continued from page 98

Probably the best-looking racing simulation ever released Ubi Soft's F1 Racing Simulation proves that 3D accelerator cards offer much more than improved frame rates. The superb TV-quality imaging includes environmental factors such as fog, rain and wispy clouds. 3D-only effects such as lens flare and realistic light sourcing, and a beautiful depiction of anything and everything you'd encounter during a real F1 season. Intelligent drivers and an authentic ride only add to the festivities, making this the new king of PC Formula 1 racing.

Longbow 2
From Origin
Tel 512-434-4263 http://www.origin.ea.com
Street price: $50

Okay so this was technically a 1997 release but it hit the market almost too late for last year's guide and is just so darned good that it couldn't be excluded this year. Longbow 2 is, by anyone's standards, one of the finest flight simulations of all time. Cutting edge graphics and immersive and exceedingly realistic flight modeling and gameplay are just some of the reasons this should be at the head of the list for any post-adolescent flyboy or flygirl.

Independence War
From Infogrames
Tel 877 463-6472 http://www.infogrames.com
Street price: $60

Big time serious space simulation for those who appreciate story and gameplay over the latest visual wizardry. That doesn't mean Independence War's graphics are lagging, just that the rest of the game is so good. Strikes a great balance of sim and adventure, plunks it all down in a rich atmosphere and embellishes it with lots of smarts.

Descent Freespace: The Great War
From Interplay
Tel 800-969-4263, http://www.interplay.com
Street price: $55

Descent it is not and considering the copycat Descent-type games on the market, most gamers will find that to be a very good thing indeed. Instead, Descent Freespace is a space combat sim, one with far fewer boundaries and a look and feel more reminiscent of Wing Commander than anything else. Add in some truly knockout graphics for immediate visual thrills and a mission editor for extended replay value, and space jocks need look nowhere else.

Strategy & war games

Starcraft
From Blizzard Entertainment
Tel 800-953-7669 http://www.blizzard.com
Street price: $60

In these graphic-oriented days where substance often takes a backseat to style, the much hyped Starcraft goes another route, offering a wonderful backstory and superb gameplay. Make no mistake, this real-time strategy game looks good too but the emphasis here is on long term satisfaction, something it delivers in droves.

Warlords III: Darklords Rising
From Red Orb Entertainment
Tel 415-382-4746 http://www.redorb.com
Street price: $50

The sequel to one of the finest turn based fantasy war games ever created (Warlords III: Age of Heroes), Warlords III: Darklords Rising is in many ways superior to its esteemed predecessor. Why? Well, with five campaigns, a couple dozen scenarios and a scenario editor, the game's longevity cannot be questioned. And now you can rule from the dark side, too—another great addition that helps make Warlords II more than just another sequel.

The Operational Art of War
From TalonSoft
Tel 800-211-6504 http://www.talonsoft.com
Street price: $60

The Operational Art of War is the latest project from revered war game developer and ex-Strategic Simulations stalwart Norm Koger. Deep and realistic and fixed with a steep learning curve, OAW is nevertheless just the ticket for hardcore war gamers, and is particularly notable for its high-end graphics, easy combat system and unique attack-planning feature. Koger scores again.

People's General
From Strategic Simulations, Inc
Tel. 800-601-7529 http://www.ssionline.com
Street price: $60

Yet another General in the Strategic Simulations army, People's General is by no means a breakthrough title, yet is relatively easy to pick up and filled with interesting scenarios. Based on the Panzer General engine, it smartly conveys war gaming from a slightly futuristic Asian setting, one that offers lots of possibilities and weapon systems. Long-term appeal is almost guaranteed, especially for enthusiastic newcomers.

Axis & Allies
From Hasbro Interactive
Tel 800-400-1352 http://www.hasbro-interactive.com
Street price: N/A

Board games, especially those with the long and storied career of an Axis & Allies, often lose something in their virtual translation. Not so here. Though only in a beta (testing)

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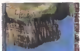
stage at press time Axis & Allies should prove fun, accessible and very replayable and should please both veterans and rookies alike.

Roleplaying

Fallout 2, Baldur's Gate
From Interplay
http://www.interplay.com
Street price: N/A



Neither of these titles were released at press time, but if the pre-release previews are to be believed (and they're incredibly positive) Interplay will have two very big winners on its hands come holiday buying season Fallout 2 is the post-nuclear holocaust successor to the well-received Fallout and Baldur's Gate is one of the most anticipated Dungeons & Dragons-style games of the last few years If you know an adventure/roleplaying game fan give these a close look this Christmas.

Might & Magic VI: The Mandate of Heaven
From: New World Computing
Tel 818-889-5600 http://www.nwcomputing.com
Street price: N/A

Classic role-playing with a classic (antiquated?) interface Might & Magic VI is the latest installment in a storied franchise Is there anything new here? Not really, but if roleplaying games are you're thing you'll appreciate the conventions, revel in the retro feel and fully realized world and use the multiple quests as an excuse to keep it on the hard drive a good long while

The hardware

Panther XL
From. Mad Catz, Inc
Tel 800-659-2287 http://www.madcatz.com
Street price: $180

Late last year a company called FP Gaming released a first-person 3D game controller that looked suspiciously like a trackball The idea was to use FP's Assassin 3D in conjunction with a standard joystick moving forward, backward and side to-side with the stick, and turning, looking and aiming up/down with the Assassin kind of like a two-part Wingman Warrior with vertical capabilities

This year, Mad Catz, Inc unveiled the Panther XL, a device built on the FP technology but with extra buttons and an on-board joystick What a concept—for supported games, there's nothing quite like it Highly recommended for 3D action lovers.

Xterminator
From Gravis
Tel 800-280-8318 http://www.gravis.com
Suggested retail price US $80

Gravis has been doing the gamepad thing since dinosaurs roamed the earth Uh actually that's not quite true but Gravis is certainly the veteran of the industry, and nowhere does its knowl-

Continued on page **104**

Newsletter for dogs and owners

NB—SitStay is a complete Web site aimed at dogs and their owners Features include a free email newsletter, sent out two to three times a week, discussion boards, chatrooms an online pedigree generator and medical Web sites for dogs as well as a collection of cool places to go for more information about dog sports
http://www.sitstay.com

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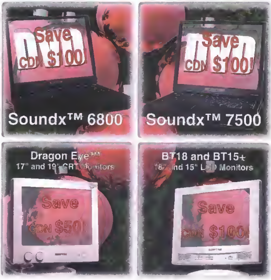

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TCP's 8th annual gaming guide

Continued from page **102**

edge and experience shine through more than in this year's wonderful Xterminator

With a horseshoe-shaped design and a sea of analog and digital controls the Xterminator is ready for any task other than joystick-oriented games such as car racing and serious flying On top are a half-dozen right thumb buttons, tightly grouped for easy access, one eight-way hat, a sliding throttle; three extra buttons for complex games, and not one, but two directional pads, one of which is analog Below are a pair of microswitch digital triggers for the third finger of each hand and two analog triggers for the indexes. And that should be enough for anyone, anywhere

Sidewinder Freestyle Pro
From Microsoft
http://www.microsoft.com
Street price $80

Taking gamepads in an entirely new direction this year was Microsoft s Sidewinder Freestyle Pro At first glance, it doesn t look much different than most pads, but inside is a motion sensor that allows you to control movement and direction simply by tilting the unit forward backward and side-to-side Nice? For arcade racing and racing-shooting games it certainly is That the Freestyle Pro is one of the most comfortable pads around only adds to its appeal. ❑

Regional European news

NB—The latest of the U.K.s regional newspapers to make it onto the Web is the *Express and Star* from the West Midlands The site is updated each day during the morning and at lunchtime with the latest local news and information. If you are interested in news from Prague, Czech Republic, the *Prague Tribune* focuses on business in the country and brings new articles online once a month.
http://www.expressandstar.co.uk
http://www.prague-tribune.cz

Mad Scientist Network

NB—The Mad Scientist Network, aimed at anyone with an interest in science is a collective cranium of scientists answering questions in many areas The "network" provides a forum in which people can learn more about the world around them The Web site has three primary divisions. ask-a-scientist, MAD labs with fun experiments with science, and the MadSci library
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Pre-Christmas Ideas...

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- Mid Tower Case ATX Form Factor
- Abit LX-6 440LX MB
- 64 MB SDRAM
- Fujitsu 4.3Gb UDMA Hard Drive
- ATI Xpert@play 8Mb AGP Video Card
- Panasonic E70 17" NI Monitor .27dp
- Panasonic 1.44 3.5" Floppy Drive
- Keytronic 104 Win95 Enhanced Keyboard
- Logitech 3 Button PS/2 Mouse
- MS Windows 98 (CD Manual and Lic.)
- Magitronic 56K Fax/Modem w/Voice Mail
- Panasonic 32X E-IDE CD-ROM DR
- Sound Blaster PCI 128 Sound Card
- Altec Lansing ACS45 Speakers w/Subwoofer

Warranty - 2 Yrs. Parts - 5 Yrs. Labour

		/Month
Intel Pentium II 300MHz (512K)	$1999	77
Intel Pentium II 300MHz (512K)	$2049	79
Intel Pentium II 300MHz (512K)	$2099	81

Pro's Power

- Asus P2B 440BX ATX Form Factor
- Mid Tower Case ATX Form Factor
- 64MB SDRAM 10ns Memory(100Mhz)
- Seagate MedalistPro 6.4GB UDMA 7200RPMHD
- Keytronics 104 Enhanced Win95 Keyboard
- Panasonic 1.44MB 3.5" Floppy Drive
- All All-in Wonder Pro 8Mb AGP
- Viewsonic Optiquest v73 17" Monitor .26dp
- Logitech 3 Button PS/2 Mouse
- MS Windows 98 (CD Manual and Lic.)
- USRobotics 56K Voice Modem
- Sony DVD Rom Dr DDU220E(5th Gen.)
- SoundBlaster PCI 128 Sound Card
- Altec Lansing ACS 45 Speakers w/Subwoofer

Warranty - 2 Yrs. Parts - 5 Yrs. Labour

		/Month
Intel Pentium II 333Mhz (512k)	$2699	104
Intel Pentium II 350Mhz (512k)	$2869	110
Intel Pentium II 400Mhz (512k)	$3169	132
Intel Pentium II 350Mhz (512k)	$3469	134

Oz Multimedia

- Mid Tower Case ATX Form Factor
- Asus P5A Super Sock7 MB 512K Cache
- 64MB SDRAM
- Fujitsu 4.3 GB E-IDE Hard Drive
- 4Mb S3 Virge 3D Video Card
- TTX Monitor 15" SVGA 0.28dp NI PNP
- Panasonic 1.44 3.5" Floppy Drive
- Keytronic 104 Win95 Enhanced Keyboard
- Logitech 3 Button PS/2 Mouse
- MS Windows 98 (CD Manual and Lic.)
- 56K Fax/Modem w/Voice Mail
- Panasonic 32X E-IDE CD-ROM DR
- On Board Sound
- Altec Lansing ACS-90

Warranty - 2 Yrs. Parts - 5 Yrs. Labour

		/Month
AMD K6 300Mhz 3D	$1409	58
AMD K6 333Mhz 3D	$1549	60
Intel Pentium 300MMX	$1649	63

Basic Multimedia

- Mid Tower Case ATX Form Factor
- Abit LX-6 440LX Motherboard
- 64MB SDRAM
- Fujitsu 4.3 GB UDMA Hard Drive
- 4 MB AGP Video Card
- Magitronic Monitor 15" SVGA 0.28 dp NI PNP
- Panasonic 1.44 3.5" Floppy Drive
- Keytronic 104 Win95 Enhanced Keyboard
- Logitech 3 Button PS/2 Mouse
- MS Windows 98 (CD Manual and Lic.)
- Magitronic 56K Fax/Modem w/Voice Mail
- 56K Fax/Modem w/Voice Mail
- 24X E-IDE CD-ROM Drive
- Ensoniq PCI 64 Sound Card
- Amplified Speakers

Warranty - 2 Yrs. Parts - 2 Yrs. Labour

		/Month
Intel Pentium II 300Mhz (512K)	$1729	67
Intel Celeron 300Mhz (128K)	$1559	60
Intel Celeron 333Mhz (128K)	$1609	62

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CD Recorders

[illegible]

Blank CD's

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Memory

[illegible]

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Monitors

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Feature of The Month

Panasonic DVD RAM (DVD Recorder) $999

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Sound Cards

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Network

[illegible]

Multimedia Speakers

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Scanners

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Modems

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[illegible]

Joysticks

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Black Monitor & Printer are extra
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64 Megabyte 168 Pins -PC-100 SDRAM
Magitronic 17" ODS .28mm Digital Low Radiation Color Monitor
ATI All-in-Wonder Pro 8MB AGPx2 Mpeg-2 Video Adaptor
Quantum Fireball EX 6.4 GB UltraDMA Hard Drive
Inwin ATX Tower Case with 235Watts Supply
Keytronic 104 Keys Windows 95 Keyboard
Logitech PS/2 Mouse with Mouse Pad
Panasonic DVD-2-ROM Internal Drive
Sound Blaster AWE64 Sound Card
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WHAT'S NEW

Continued from page **52**

According to Iris, Iris CAT (for Windows CE) is the only anti virus product for the compact operating system. The challenge for CE software producers, the firm says, is making the products small enough to fit in the slimmed down system while maintaining functionality.

The firm says that the software protects Windows CE device users from viruses lurking inside of transferred files on the new small systems. Alan Komet, Iris' manager of worldwide marketing, said that, with Windows CE devices having the ability to send and retrieve email and attached files, it makes their desktop counterparts equally vulnerable to virus attacks.

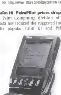
"What's more, once a virus is loaded into a CE device, the user's desktop system, and in turn, the entire enterprise is equally at risk if the file is transferred or emailed back to the desktop system," he explained.

Iris CAT sells for US$29.95 and can be downloaded from the company's Web site. A 30-day free trial of the software is available via the Web site.

Iris http://www.irisav.com/buycatnew.html

Palm III PalmPilot prices dropped

The Palm Computing division of 3Com Canada has reduced the suggested list prices of its popular Palm III and PalmPilot Professional organizers. The Palm III is now listed at $499, down from $549, and the PalmPilot Professional is listed at $349, down from $429.



It's widely believed the price cuts are part of a strategy to grab and hold onto available market share, now that significant competition has entered the market with such devices as the Casio Cassiopeia, Phillips Nino and the Everex Freestyle.

Nick Tidd, sales director for 3Com Canada, says that "by [illegible] the [illegible] of the Palm III and PalmPilot Professional Edition products we are able to make handheld computing devices more affordable to a wider range of consumers." A recent survey by Evans Research showed that Palm Computing products represent 77 percent of the Canadian handheld computing market.

Both the Palm III and PalmPilot Professional come with a full suite of personal information management applications and feature Palm's innovative HotSync technology, which seamlessly synchronizes data on the organizer to a PC at the touch of a button.

Customers who purchase a Palm III before Jan. 9, 1999, will receive a mail-in certificate for a free Palm Travel Pack, valued at $199. This package includes Frommer's 10-Minute Guide to Travel Planning on the Net, TrekWare mapping software, World FAQ destination information software, the Concept Kitchen care kit, a custom travel case for the Palm III and an extra stylus. —*KS-R*

3Com Canada Tel 416-498-3266
Palm Computing http://www.palm.com

Son of (Microsoft) Bob killed

A round of applause erupted at the recent Professional Developers Conference in Denver when Microsoft product managers deliberately executed the Microsoft Office Assistant. By execute, we don't mean "run"—we mean "kill."

Any Microsoft Office user is likely familiar with the Microsoft Office Assistant, a hyperactive animated paper clip who often intrudes when you're writing a letter or any other common function. The Assistant is a holdout from the days of Microsoft Bob, a failed product in which animated characters helped users with various tasks.

While the Assistant admittedly is valuable for neophyte users of Office, it has long drawn scorn from developers who find it far too cute.

Microsoft representatives Brian Valentine and Tom Rizzo showed the developers at the conference how to get rid of the Assistant with a simple line of Visual Basic code.

Microsoft plans to make the code available on its Web site soon. The code enables a menu option that says, "Kill the Assistant." When clicked, the paper clip says "I'm melting! I'm melting!"—then disappears for good. —*KS-R*

Storm files for bankruptcy protection

MOUNTAIN VIEW, Calif. (NB)—Scanner spe-

Continued on page **125**

COMPUTER IMAGE

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[illegible]

UPGRADES

All upgrades include NEW MAIN BOARD

FROM \ TO	P-233 Mhz MMX	Pentium II 300 Celeron	Pentium II 300 MMX	Pentium II 350 MMX
486	$ 185	$ 285	$ 475	$ 555
Pentium 75	$ 145	$ 245	$ 435	$ 515
Pentium 100	$ 125	$ 225	$ 415	$ 495
Pentium 133	$ 105	$ 205	$ 395	$ 475
Pentium 166	$ 95	$ 195	$ 385	$ 465

SPECIAL
FROM UPGRADES
Mainboard & CPU

486 Item	$19
Pentium 75	$69
Pentium 100	$99
Pentium 133	$119

M BOARDS & CPU

TX P II M/Board W/MMX Tech
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BX 100Mhz M Board

IBM 233 MMX	$175
Pentium 233 MMX	$275
Pentium II 266 Cel.	$245
Pentium II 300 Cel	$285
Pentium II 300	$475

MEMORY

16 MB RAM EDO	$29
32 MB RAM EDO	$59
32 MB SDRAM 10ns	$59

MULTIMEDIA

24XCDROM	$59
Mitsumi Recorder 2x8	$379
Yamaha 16b Sound	$29
Sound Blaster 16	$49
100W Speakers	$19

HARD DRIVES

2.1 GB UDMA	$169
2.6 GB UDMA	$179
3.2 GB UDMA	$189
4.3 GB UDMA	$209
6.4 GB UDMA	$269

FAX/MODEMS

56K WIN F/M/V	$59
56K F/M/V	$79

MONITORS

14" SVGA .28	$169
15" SVGA .28	$199
17" SVGA .28	$349

Prices are already 4% cash discounted and subject to change without notice
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SPECIALS SPECIALS

SYSTEMS SYSTEMS

P-233 MMX	$525
Pentium 266 CELERON	$616
Pentium 300 CELERON	$656
Pentium II 266	$845
Pentium II 300	$865

BX 100Mhz AGP Main Board
32 MB SDRAM 10ns
3.2 GB UDMA H.D. 1.44 FD
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with system Windows 95 $95

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6.4GB Quantum Fireball SE UDMA HD	$245
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High End Multimedia System with Intel Pentium® II Processor

300MHz w/128K	333MHz w/128K	333MHz w/512K
$1059	$1079	$1219

Asus P2L-B, Intel 440LX Chipset MB
Mid Tower Case w/230W Power Supply

350MHz w/512K	400MHz w/512K	450MHz w/512K
$1349	$1529	$1849

Asus P2B, Intel 440BX Chipset ATX MB
ATX Tower Case w/250W Power Supply

SYSTEM INCLUDES:

- CPU Heat Sink & Ball Bearing Cooling Fan
- 32M SDRam, 168 pins
- 6.4GB Quantum Fireball EX Ultra DMA HD w/512K Cache
- Panasonic 1.44MB Floppy Drive
- ATI Xpert 98 AGP 2X Rage Pro 8MB Video Card
- 2 Fast Serial Ports 1 Enhanced Parallel Port,support USB
- Panasonic 32X IDE CD-ROM
- Creative Sound Blaster PCI 128 PnP Sound Card w/CD
- 120W Amplified Speakers
- 104 Keytronic Keyboard
- Logitech PS/2 Mouse & Mouse Pad

Monitor Extra!

Upgrade To:

Matrox G-200 8M/16M AGP Card	+$40/110
USR 56K/V.90 Int. Voice Fax Modem(Not WIN Modem)	+$ 115
Panasonic DVD-2 IDE ROM Drive	+$ 100
Creative Lab Live Value	+$ 55
300W Amp. Speakers	+$ 26
Yahama Subwoofer Speaker	+$ 50

Monitor Extra: (With System purchase only)

14" 0.28 1024x768 N.I.	$159
15" 0.28 1280x1024 N.I.	$199
15" Mitsubishi Diamond Scan 15VX 0.28 1280x1024N.I.	$235
15" Panasonic S50 0.27 1280x1024 N.I.	$259
17" ViewSonic(OptiQuest) V78 0.28 1600x1280 N.I.	$579
17" ViewSonic E771 0.27 1280x1024 N.I.	$439
17" ViewSonic P775 0.25 1600x1200 N.I.	$709
19" ViewSonic PS790 0.25 1600x1200 N.I.	$819

New Generation! ATX Form Factor w/ Pentium II® Processor

350 MHz	400 MHz	450 MHz
$1969	$2149	$2469

100 MHz

- Asus P2B ATX Motherboard (Intel 440BX Chipset),
- True Pentium® II CPU Built-in 512K Cache,
- CPU Heat Sink & Ball Bearing Cooling Fan
- 64M PC100 SDRam, 168Pin, 100MHz,
- 6.4GB Quantum Fireball EX UDMA HD w/512K Cache
- Panasonic 1.44 Floppy Drive
- ATI Xpert @Play 98 AGP 2X Rage Pro 8MB PC2TV,
- ViewSonic(Optiquest) Q71 17" 0.27 1280x1024 N.I. Monitor
- USR 56K V.90 Int. Data/Fax/Voice Modem(Not WIN Modem),
- Panasonic 32X IDE CD-ROM Drive,
- Creative Sound Blaster PCI 128 PnP Sound Card w/CD
- 120W Stereo Speakers And Yamaha Subwoofer Speaker,
- ATX Tower Case w/250W ATX Power Supply
- Microsoft Natural PS/2 Keyboard,
- Logitech PS/2 First Mouse Plus w/Wheel & Mouse Pad

Upgrade to:

Panasonic DVD 2 IDE ROM Drive	+$ 100
7.6GB Quantum Fireball EL UDMA HD w/512K Cache	+$ 50
10.2GB Quantum Fireball EL UDMA HD w/512K Cache	+$ 140
Creative Lab Live Value	+$ 55

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$145	Panasonic	32X
$130	IDE	32X

W/Creative Sound Blaster AWE64
120W Amp Speakers

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Creative 4D PCI 128	+$20
Downgrade to 3D 16 Bit Sound Card	-$38

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ATX Form Factor Pentium® II System

- PC100 Expert AGP Chipset,
- Support Pentium II 233-450 MHz CPU at Slot 1 66/100 MHz
- CPU Heat Sink and Ball Bearing Cooling Fan,
- 32M SDRam 10ns 168pins (Exp. Up to 768MB),
- Fujitsu 4.3GB Ultra DMA IDE Hard Drive,
- Panasonic 1.44MB Floppy Drive
- Integrated 64 Bit 3D AGP w/8MB,
- 32X IDE CD-ROM
- On Board Sound Pro, Digital Audio Interface,
- 120W Amplified Speakers,
- ATX Tower Case w/250W ATX Power Supply
- WIN 95 104 Keys PS/2 Keyboard,
- Free M.S. Comp PS/2 Mouse & Mouse Pad

100 MHz

2 years labor & 1 year parts for the system

300 MHz w/128K	333 MHz w/128K	350 MHz w/512K	400 MHz w/512K	450 MHz w/512K
$829	$849	$1029	$1209	$1529

Super Intel Pentium® II Processor

300 MHz w/128K	333 MHz w/128K	333 MHz w/512K
$1439	$1459	$1599

- CPU Heat Sink with Ball Bearing Cooling Fan,
- Asus P2L97 Intel 440LX Chipset ATX MB (233-333MHZ),
- 64M SDRam 10ns 168pins
- 6.4GB Quantum Fireball UDMA Hard Drive
- Panasonic 1.44 FDD
- ATI 3D Xpert98 AGP 2X Rage Pro 8MB Video Card
- 15" Mitsubishi Diamond Scan 15VX 0.28 1280x1024 N.I. Monitor
- Acer PCI V.90 Int. W/Voice Fax Modem
- Panasonic 32X IDE CD-ROM Drive
- Creative Sound Blaster PCI 128 PnP Sound Card w/ CD
- 120W Stereo Speakers System
- ATX Tower Case with 250 Watt Power Supply,
- 104 Keytronic PS/2 Keyboard
- Logitech PS/2 First Mouse Plus w/Wheel & Mouse Pad

ATX Form Factor

2 years labor & 1 year parts warranty for the system

Upgrade to:

7.6GB Quantum Fireball EL Hard drive w/512K Cache	+$ 50
Panasonic DVD-2 IDE ROM Drive	+$100
Yamaha Subwoofer Speaker	+$ 50

Student Complete Pentium® II 300 MHz Package

- Pentium II (Intel 440EX/LX Chipset)Motherboard
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- 56K V.90 Int. Data/Fax/Voice Modem
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- Win95 104Keys Enhanced Keyboard
- Free MS Comp Mouse and Pad

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15" 0.28 1280x1024N.I. Monitor	+$40
Scanner 30 Bit 300x600	+$59

SCSI SYSTEM with INTEL PENTIUM® II Processor

- Asus P2BS Motherboard 233-450 MHz
- 2 Fast Serial Ports 1 Enhanced Parallel Port
- Support USB On board AGP connection
- CPU Heat Sink & Ball Bearing Cooling Fan
- 64MB PC100 SD Ram, 168pins
- Quantum Fireball ST 6.4GB SCSI Hard Drive
- Panasonic 1.44MB Floppy Drive
- ATI Xpert 98 8M AGP 2X Rage Pro 8M Video Card
- Built in Ultra SCSI controller
- Toshiba 32X SCSI CD ROM Drive
- Creative PCI 128 Sound Card With CD
- ATX Tower Case w/250W Power Supply
- Microsoft Natural Keyboard
- Logitech PS/2 First Mouse Plus w/Wheel & Mouse Pad

350 MHZ	400 MHZ	450 MHZ
$1999	$2179	$2499

AMD K6-2 3D Package

100 MHz

- Asus P5AB Motherboard (233 MHz-350MHz)
  (PC Health Monitoring Baby AT Form Factor)
- Built in 512K Pipeline Cache
- CPU Heat Sink and Ball Bearing Cooling Fan,
- 32M PC100 SDRam 168Pin
- 4.3GB Fujitsu Hard Drive
- Panasonic 1.44FDD
- 4MB AGP Video Card w/MPEG
- 56K V.90 Int. W/Voice Fax Modem
- 32X IDE CD ROM Drive
- Built In 16 Bit 3D Sound Card,
  120W Amplified Speakers,
- Mid Tower Case w/230W Power Supply
- Win 95 104Keys Enhanced Keyboard
- Free Comp PS/2 Mouse & Mouse Pad

AMD K6-2 300 (3D)	$849
AMD K6-2 333 (3D)	$869
AMD K6-2 350 (3D)	$919

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Asus Pentium® II P2L97DS -ATX*	$469
Asus Pentium® II P2L97S -ATX*	$289
Asus Pentium® II P2L97 -ATX	$165
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Asus Pentium P5A-B w/512K	$149
Houston Pentium® II 440LX AT	$135

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128MB PC100 SDRam 168pins	Call
64MB PC100 SDRam 168pins	Call
32MB PC100 SDRam 168pins	Call
128MB SDRam 168pins	Call
64MB SDRam 168pins	Call
32MB SDRam 168pins	Call
16MB SDRam 168pins	Call
32MB -60 EDO 72pins	Call
16MB -60 EDO 72pins	Call
8MB -60 EDO 72pins	Call
4M 70 30 pins	Call

BACKUP DRIVES

Iomega Zip Plus 100MB Ext.	$256
Iomega Zip Drive 100MB Int.	$128
Iomega Zip Drive 100MB Ext.	$159
Iomega Zip Disk 100MB	$17

FLOPPY DRIVES

Panasonic 1.44MB	$25
Panasonic 120MB	$139
120 MB Floppy Disk	$18

HARD DRIVES

5.1GB Quantum Fireball [illegible] 512K	$230
6.4GB Quantum Fireball [illegible] 512K	$245
7.6GB Quantum Fireball [illegible]	$289
10.2GB Quantum Fireball [illegible]	[illegible]
6.4GB Quantum Fireball SE Ultra [illegible]	[illegible]
6.4GB Quantum Fireball SE Ultra SCSI	[illegible]
4.3GB Western Digital IDE Ultra DMA	$219
6.4GB Western Digital IDE Ultra DMA	$249

VIDEO CARDS

ATI TV/FM Tuner	[illegible]
Trident 4M EDO AGP	[illegible]
ATI 3D Xpression 4M EDO AGP	[illegible]
ATI Xpert 98 8M AGP	[illegible]
ATI Xpert @ Play 8M AGP	[illegible]
All-In Wonder Pro 8M AGP	[illegible]

CD-ROM DRIVES

Panasonic 32X IDE	[illegible]
NEC/Toshiba 32X SCSI CD-ROM	[illegible]
Mitsumi Int 8 By 2 IDE CD-Writer	[illegible]
HP 7200i IDE CD-Rewriter	[illegible]
HP 7200e Parallel CD-Rewriter	[illegible]
HP 8100i IDE CD-Rewriter	[illegible]
Yamaha CDW-4260 Int SCSI Drive Only	[illegible]

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Creative Lab Live Value	$139
Sound Blaster PCI 128	$85
Sound Blaster AWE64 Gold PnP	$139
Sound Blaster AWE64 PnP	$85
Sound Blaster 16	$39
Altec Lansing ACS44 Subwoofer	$119
Altec Lansing ACS48 Subwoofer	$189

MONITORS

ACER

[illegible] 0.28 1024x768	[illegible]
[illegible] 0.28 1280x1024	[illegible]
[illegible] 0.27 1280x1024	[illegible]
[illegible] 0.26 1600x1200	[illegible]
[illegible] 0.26 1600x1200	[illegible]
19" [illegible] 0.26 1600x1200	$1[illegible]

RELISYS

14" 0.28 1024X768	$169
15" 0.28 1024x768	$189
[illegible] 0.28 1280X1024	$209
17" 0.28 1280X1024	$330

PANASONIC

[illegible] S50 0.27 1280X1024	$289

SONY

15" 100GS 0.25 1280X1024	$439
17" 200ES 0.25 1280x1024	$830
17" 200GS 0.25 1280x1024	$930
17" 200PS 0.25 1600x1200	$1069
[illegible] 400PS 0.25 1600x1200	$1329

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The gift that keeps surfing: online services

Parents worry about the amount of unsuitable material online ranging from extremist politics to pornography and violence to religious cults and scamsters trolling for suckers

A variety of Web censorship services, such as Net Nanny offer useful features, but can create new problems. They often block off useful sites that the censorship service doesn't recognize as safe An increasingly popular approach by Web publishers to offer a safe complete "one-stop shopping" experience to Web users is the "portal" model

Portals are frequently the creation of major media corporations such as Warner, or Disney that develop a Web site featuring the full vast range of their own product offerings, from magazines to movies and establish partnerships with other companies with compatible products and services. At the end of the day the Disney site for example, combines family-oriented online entertainment with the marketing and sale of products ranging from travel to books, to videos to software

However to keep surfers coming back to a family-oriented portal (or any portal for that matter) there has to be constantly changing, entertaining content Although Disney wants a monthly fee for full access to its site the company enjoys one of the biggest subscriber bases of all the online services and the free part of the site is one of the busiest locations on the Internet

Yahoo (http://www.yahoo.com) Yahoo Canada (http://www.yahoo.ca) and the Canadian sites of Canoe (http://www.canoe.ca) @Home and Sympatico are also good places for families to start their daily Internet excursions

Special needs Ability Online

Ability Online is a non profit Canadian online service or "community" that consists principally of disabled people (mostly young) their families teachers and medical providers The site offers them a place to gather for conversation support and advice on how to live with disabilities or special needs It is a wonderful resource for its target audience and an example of what the Web can be at its best

A faster internet for Xmas @Home

In the constant quest for faster "data pipes" and less waiting on the Internet computer users have found progress frustratingly slow The new v.90 standard for 56Kbps (kilobits per second) modems marginally improved download speeds but the other potentially faster technologies such as ISDN (integrated services digital network) and DSL (digital subscriber line) are variously unimpressive expensive or unavailable

The main high-speed Internet option for Canadian urban consumers is cable modem access Several million households are now located in "cable modem ready" neighborhoods and perhaps 100 000 households are already making use of the service, offered through cable suppliers such as Shaw, Rogers (http://www.rogerswave.ca) and Cogeco

Prices for this service were recently dropped as a promotion to encourage new subscribers. The $39.95 monthly fee includes unlimited Internet access, a personal Web site cable modem rental and multiple email addresses

For cable access an Ethernet network interface card is installed in the subscriber's computer and a cable modem is attached to connect the computer to the household cable feed The original Wave cable modem service offered up to 500Kbps data transfer speeds (this writer, an early Wave subscriber was able to get up to about 380Kbps under ideal circumstances)

The new @Home version of the service offers "up to" 2.5 to 3 Mbps (megabits per second) but again performance will vary according to speeds on the Internet outside the @Home network

In addition to the monthly fee there is usually an installation charge of $100 to $150 but in some areas this fee has been waived It often takes a few weeks for setup and installation so don't wait until the last minute

—*Jeff Evans*

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Girl-friendly software gift ideas

One of the major trends in home computing over the last two or three years has been an increasing participation by women and girls. This trend, demonstrated in expanded female use of the Internet, is also evident in the increased purchase of "girl-friendly" (i e relationship- and conversation-oriented) software and online services

Interestingly, although computer games in the past have been considered a "guy thing," there have always been some with large female user bases Sierra On-Line's King's Quest adventure game series, for example, which debuted in 1983, was written by Sierra co-founder Roberta Williams

Williams, a fan of fantasy storytelling, quite deliberately designed a game with a higher proportion of puzzle solving and verbal interaction between characters, and a lower quotient of killing and maiming than most other adventure games Up to 40 percent of King's Quest players were female, compared to an industry norm of five to 10 percent, according to Sierra Many educational or edutainment titles, such as interactive encyclopedias or reading programs are supposed to be gender neutral, but software developed specifically for young girls, often written and designed by female software developers, has become more common

Mattel has become the leader in girl-oriented software, with its flagship Barbie titles aimed at "tween-age" girls, a demographic category that includes nine to 14 years olds Mattel isn't the only player in this market, though

Recently, the industry has been buzzing about a new company, Purple Moon, which was established for the sole purpose of developing software for young girls

—Jeff Evans

By Jean Allen Ikeson
and Jeff Evans

Madeline Rainy Day Activities

From: Creative Wonders
Tel: 617-761-3000
http://www.learningco.com
For Windows, Macintosh
Recommended: Color printer
Price: $29.99

Madeline Rainy Day Activities is just the thing for the holidays to entertain and delight with problem solving, creativity, science and grammar skills and a few French and Spanish words thrown in along the way. While rated for five to seven year olds and aimed at the "girl" market, five and six year old boys seem to enjoy Madeline as much as their female peers.

The Madeline character is a charming Parisian girl and a nice change from the Hollywood characters of most American software products.

The Rainy Day CD-ROM comes with more than 100 activities, 40 of which are printable. Kids can create postcards, masks, door signs and stickers, or solve puzzles and play games. They can explore Madeline's schoolhouse and learn French or Spanish words and phrases. Many of the activities are sure to create endless giggles.—*JA I*

Barbie Jewelry Designer

From: Mattel Media
Tel: 888-833-4211 http://www.barbie.com
For: Windows 95
Required: Color printer
Retail: $49.99

When I was a girl, my idea of an ideal Christmas present was a gift that I could use to make something. Barbie Jewelry Designer is just such a package. Girls can use their computer and color inkjet printer to design and make jewelry using a special Print 'n Shrink plastic. The designs are printed onto this plastic and baked in an oven to shrink and harden.

Included in the kit is the "hardware" or latches and clips to connect the sections of the jewelry. Girls can also create personalized stickers and decorate square beads. All of the projects, from bracelets to necklaces, are colorful and can be customized using Barbie colors and graphics or other graphics available on the disc.

Jewelry Designer is aimed at girls eight years and older. While I used to bemoan Barbie's image as being unrealistic and unattainable, I have had second thoughts after reviewing a number of Barbie computer products from Mattel. They are high quality and

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quite sophisticated for a modest price. But best of all they are full of constructive, creative fun. And using them will encourage girls to start thinking of computers as girl friendly tools.—*JA-F*

American Girls Premiere 2nd Edition

From: The Learning Co. (with Pleasant Co.)
Tel: 617/761-3000 http://www.learningco.com
For: Windows, Macintosh
Recommended: Color printer, microphone
Street price: $49, $58 (collector's edition includes collectible on baseball cap and collector cards)

American Girls is the blockbuster historical period empire of dolls, books, magazines, and clothes from Pleasant Co. that now includes an interactive CD-ROM produced with Learning Co. While the live characters in this package—which ranges from Revolutionary War to Second World War eras—are American, this game is of such high quality and play/educational value. It's lack of Canadian content is a minor flaw.

Some software for girls is fluff, but in American Girls you'll find depth and challenge as well as content appealing to those who are creative or like "crafts." The software involves creating and animating characters and developing a play—a fairly complex task that helps develop early programming skills.

Learning Co. has rated it for eight to 12 year olds, but I think 10 to 13 year olds would be a better bet, even though the doll aspect of the program will appeal to younger girls.

The five American Girls are characters in an historical play. The challenge of creating the play begins with selecting indoor or outdoor settings, characters, costumes and props. The live characters are then given animation sequences that move them around the stage and eventually speech and emotion are added.

Stage lighting can be adjusted and sound effects added along with music that is compatible with the historical period being dramatized. Dialogue may be typed in for a "dubbed" speech, or sound clips can be

Continued on page **114**

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Girl friendly software

Continued from page 112

recorded and added in. Scripts with stage directions can also be printed out so girls can act out the story themselves with their friends, parents or siblings. They can also print playbills.

All of the programming is sequenced and built up using a VCR type interface so objects, actions or sounds may be added or edited frame by frame. It can be played on a simple level or in a more advanced way by using the included Director's tutorial.

This two-disc package is packed with so many features that it is worth twice the retail price. It would be a great prelude for those who eventually want to edit and create their own video productions—the hardware and software in this category is just reaching the consumer market and will be the next "fad" for blockbuster school projects.—*JA-J*

News from Purple Moon

Tel 888-2PURPLE http://www.purple-moon.com

When *TCP* went looking for girls' software this year, we quickly ran into a relatively new software line from Purple Moon. A quick online search took us to the company's Web page and we contacted Purple Moon representatives to get their take on the burgeoning audience for girl friendly software.

According to a Purple Moon representative, before publishing its first game the company spent a couple of years doing market research on entertainment software, user interfaces, storytelling and the particular social and linguistic habits of young women.

In the course of its research the company found that apparently "guy" software has limited appeal to most women, not just because of the high levels of violence but because most females find the search hunt fight-capture-win dynamic of male-oriented games boring and repetitive. In fact, many women in the study were not so much bothered by the shoot-'em-up nature of many male-oriented games, they just find it uninteresting.

Purple Moon discovered that even women who play such games—Quake II or Tomb Raider II for example—tend to have a different focus than men playing the same game. Women are interested in the problem-solving aspects of the game and more often than not enjoy the online interaction with other players.

Purple Moon's designers and writers decided to differentiate their games from everything else on the market by giving players a wide variety of characters to choose from, increasing the likelihood that they will identify with one of the selections. The developers also decided to focus on cooperation, relationships, and conversations between characters.

The result is a very different kind of game. Purple Moon continues to add to its list of titles, branching out into sports simulations where, again, team building is a large part of the game.

Current Purple Moon offerings include the Rockett series of games, which are described as friendship adventures, and the Secret Paths series of puzzles and mysteries, which also focus on friendship and include characters who share their secrets and discuss their families and feelings.

Purple Moon has tailored both lines for eight to 12 year olds, and priced these titles at US$29.95 each. Also available from the company's online store are dolls and accessories based on characters from these games.—*JE*

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HP helps put Web content on paper

By Jacqueline Emigh

NEW YORK (NB)—Hewlett-Packard has rolled out Instant Delivery a new software technology that will now be used by publishers like Time Inc New Media and *National Geographic* to produce Internet content specifically designed for print-out by consumers on home PCs.

HP officials say Instant Delivery is aimed at increasing use of the Web in the home market by making it easier for end users to find and work with relevant and interesting content.

Users will be able to pre-schedule print out of requested Web-based documents on any printer supporting the HTML (hypertext markup language) and PDF (portable document format) formats, said Vyomesh Joshi, home business manager in HP's Consumer Products Group.

"The power of the Internet will be placed in the hands of consumers. They will be able to print what they want, when they want," Joshi said.

Publishers planning to support HP Instant Delivery include Time Inc New Media *The Wall Street Journal* (*WSJ*) Interactive Edition, MSNBC *USA Today* Slate, *National Geographic* Interactive; and Marvel Comics.

Many people today still prefer to work with paper-based content Joshi asserted. And by and large consumers still find it difficult and time consuming to locate information on the Web

Only about two percent of the 58 trillion pages printed in 1998 will be output on to home inkjet printers, according to HP's projections Newspapers and magazines will account for a full 40 percent of the 58 million pages, catalogs 18 percent coated magazines, 14 percent books and publications 13 percent, copies, four percent forms, another four percent with the remaining falling into the "other" category observed the HP exec

WSJ Interactive plans to use Instant Delivery in place of its own print function, and Thomas Baker vice-president and general manager Printouts of the online newspaper have proven popular in the past among users who want to take along articles on business trips, Baker illustrated

For all publications distributed through Instant Delivery layouts will be specifically devised for hard-copy printout the officials said

Time Inc. New Media, *National Geographic*, *USA Today*, and Slate will be among a category of publishers that will produce unique publications" for distribution through the new software technology from HP

Time Inc. for example is planning a publication called Afternoon Update that will pull together closing stock prices, together with "compelling and interesting news" from a wide variety of publications ranging from Time.com and *People* to Dr Ruth, said James Macove the company's vice-president of news Time Inc will release Afternoon Update at about 4 30 p m. daily

National Geographic traditionally a monthly glossy magazine, is now adding a daily online news component, also for distribution through Instant Delivery, noted Lawrence R. Lux, senior vice-president and managing director for *National Geographic* Interactive

HP plans to offer Instant Delivery as a free download from the Web (http://www.instant-delivery.com) A public beta trial will also be conducted, according to Joshi

In the future HP will definitely expand the use of Instant Delivery to include more business-to-business publications, Joshi said. ❑

Hewlett-Packard http://www hp.com

Canadian Net ad revenues climbing

TORONTO (NB)—Canadian Web sites will see an 82 percent increase in advertising revenues to $37 7 million a new study from Ernst & Young and the Internet Advertising Bureau (IAB) Canada said Calendar year 1998 revenues were projected to be at $20 7 million and first half revenues were estimated at $8 million

Ernst & Young's *Internet Advertising Survey* said advertising agencies were the source of $12 million of Canadian Internet advertising revenues in 1998 representing 58 percent of total 1998 advertising revenues, compared to 44 percent in the 1997 *Year End Survey*

IAB Canada officials said the survey results are "completely in line" with the group's internal interests.

"Revenues will continue to build [in Canada] as media buyers become more comfortable with using the Internet as a complementary advertising vehicle alongside the more traditional advertising approaches " says Miles Faulkner, partner Ernst & Young Management Consultants NetCommerce Solutions team.

The survey covered 73 Canadian-based Web "entities" believed to generate the majority of Internet advertising revenue in Canada, an Ernst & Young spokesperson said Ernst & Young sent out a questionnaire which was designed in conjunction with IAB Canada along with Internet industry representatives and advertising experts. Personal and telephone interviews were conducted with selected companies to elicit additional insights and discuss trends and analyzes. ❑

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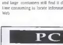
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Presario 1230 costs little, delivers a lot

By Rod Lamirand

Compaq's Presario line targets students, educators or anyone who is looking for a notebook from a brand name manufacturer but isn't interested in spending the big dollars that buying brand names implies.

Presario 1230
From Compaq Canada
45 Vogell Rd. Richmond Hill ON L4B3P6
Tel 800-263-5868
http://www.compaq.ca
Estimated street price $2,200

One of the ways Compaq made the price of the Presario 1230 more attractive was to use a 233 MHz MediaGX processor from Cyrix, instead of a more expensive Intel CPU. But it's not just brand name issues that allow manufacturers to create cheaper systems using Cyrix MediaGX CPUs. MediaGX chips incorporate several functions (graphics, audio, memory control and the PCI interface) which reduce design and manufacturing costs. While in head-to-head tests Intel chips would perform better in some areas, notably number crunching, such tasks are not the predominant functions of multimedia, entry-level notebooks like the Presario 1230.

The Presario 1230 comes with 32 MB of SyncDRAM, which is expandable to 96 MB. (In the last year and a half SDRAM has replaced EDO RAM in all but the cheapest systems.) As well, the 1230 has a 3.2 GB hard drive, a built-in 24x CD-ROM drive and a V90-compliant 56Kbps modem.

The notebook's 12.1 inch HPA (high performance addressing) screen isn't the biggest or brightest available but it is easy to read. It also helps keep the overall cost of the machine down, since a TFT screen or a larger screen would cost a lot more. HPA is a very good implementation of passive display technology.

Continued on page **118**

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Presario 1230

*Continued from page **116***

To compare, I placed the 1230 beside a second-generation Apple G3 PowerBook with a huge 14.1-inch TFT display. The Mac had a great display but in all honesty I could hardly tell the difference, particularly when sitting directly in front of the machine. The HPA screen, however, was really only viewable by a single person, because it lacks the wider viewing angles of a TFT display.

Cosmetically, the Presario 1230 is quite attractive. The front of the curved wrist rests house JBL speakers, which, when Windows boots the startup WAV file, give a surprisingly full sound. The Compaq presentation, which runs the first time you start the computer, uses the JBL Pro speakers to their full extent in a well-crafted introduction to the Presario 1230. The presentation walks the user through various steps including online registration and Internet setup.

And speaking of the Internet, there is an oval, silver button just in front of the touchpad flanked by two smaller buttons. The larger button has the letter "I" on it and when pushed instantly launches the Web browser, in this case a Compaq-customized version of Microsoft Internet Explorer 4. The other two buttons—one with a plus sign, and the other a minus—control speaker volume. This computer was built for multimedia. (There are similar buttons on the keyboards of many of the Presario desktop PCs.)

I used the Presario notebook in various situations over a period of a month. One feature I particularly liked was the default power management settings, which powered the machine down into sleep mode. There is a button that causes the 1230 to exit the operating system, save all settings, and shut down. When you press the button, the whole system returns to its previous state in about 30 seconds. This is much faster and more convenient than the usual procedure for booting up or shutting down a system.

The pointing device is a built-in touch pad that can be adjusted for sensitivity and function. I adjusted the settings so I could perform the equivalent of hitting "Enter" by tapping the pad, and changed the sensitivity so I wouldn't move the cursor if my wrist inadvertently swept the pad when typing.

I didn't use the front-mounted microphone plug but did use the earphone jack beside it. The external plugs on the machine's back made it easy to plug in an additional monitor and mouse. I also tested a number of USB (universal serial bus) products, from a joystick to a color scanner with only one difficulty, which I traced to the peripheral device rather than the computer.

Battery life was not outstanding, but as good as any other comparable notebook computers equipped with NiMH batteries. One advantage to the NiMH battery was the speed with which it recharged. On the 1230 the battery level is indicated in software (on the Presario 1600, the 1230's more expensive sibling, battery level is indicated on an LCD read out).

When you consider the price, the included software (which allows you to completely restore the system to its original configuration using just one CD-ROM), and the Compaq name, the Presario 1230 is a sensible choice for your notebook purchase. ❑

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Sound Blaster PCI128 Sound Card
ATX Mid-Tower Deluxe Case with 250W
Microsoft Natural Elite Keyboard
Microsoft Intelli Mouse PS/2
Altec Lansing ACS 45 Subwoofer System
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AMD K6 2-300...$1,144.
Celeron 300A .. $1,100.
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64M SDRAM, PC100, 168 pins, 10ns
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Panasonic 32X IDE CD-ROM
Panasonic 1.44M Floppy Drive
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Yamaha PCI 3D Sound Card
ATX Mid-Tower Case with 250W
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Canadian payroll software

TCP's annual survey finds increase in features and ease of use across category

By Nancy Hamm and Joan Hornal

Canadian payroll software continues to become more feature-packed and easier to use each year

All programs surveyed this year support multiple pay period types and all provinces and territories of Canada Tutorials, telephone support and contact-sensitive help are also available for all of the programs The software features continue to improve; user interfaces are more consistent with the Microsoft Windows operating system interface and most of the products are more flexible than before. We found all of the programs are also Year-2000 compatible More and more systems are including human resources information user definable fields or are offering add-on modules for human resources management

Continued on page **122**

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Canadian payroll software
Continued from page **120**

This year, we have looked at two categories suitable for small businesses: stand-alone systems coming in at less than $1,000 and integrated accounting systems. In the first category, we liked Paymate for its job costing, human resource information, ease of use and user friendliness. In the integrated category we liked the flexibility and costing features of Quickbooks Pro.

All of the programs reviewed in this survey performed well and were installed and tested on a PC with a Pentium 100 MHz CPU, 32 MB RAM, color monitor and Windows 95.

See the table accompanying this survey for contact information. Web site addresses and prices for each of these products.)

Part 1:

Stand-alone Windows systems under $1,000

The products in this category are designed for small- to medium-sized businesses and not-for-profit organizations with up to 500 employees. All calculate some earnings and benefits and track accruals.

EasyPay
EasyPay offers a flexible selection of earnings, benefits and deductions for small- to medium-sized businesses, and non-profit payrolls. Advanced features include quick-entry time cards and quick payroll runs to replace manual cheques, recurring time cards and online cheque reconciliation—all timesaving features. An optional "customizer" module is available for importing and exporting data and writing macros.

Data can be selectively exported and job-cost information generated. It supports direct deposits—a feature employees will like. We liked the employee-pay history feature that allows you to display a paycheque record and access each detailed record. The reporting features are very comprehensive and flexible, and the program interfaces with many general ledger products. The manual is well laid out and very easy to use. Online help is context sensitive.

H.E.L.P. Payroll for Windows
This package was easy to install and set up. Since we reviewed a beta version, some of the features were not available for testing (the help function, for example) but we liked what we saw. Time-card entry is easy and cost splitting between jobs or departments is very straightforward. Employee year-to-date information and history are accessible from both the employee buttons and the timecard button. Planned reporting is very complete. We

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liked the export features that allow you to email, fax or use reports in other programs

Integrated Office Payroll for Windows
We found this application easy to install and extremely easy use. Online help is indexed and context sensitive. Features include unlimited earnings and deductions, departments, recurring time cards and a direct deposit interface. Error correction is extremely easy and calculated deductions can be manually overwritten. Cheque information can be viewed on screen and edited. Personnel management features include vacation, review and promotion tracking. This program would be a good choice at a reasonable price for small- to medium sized business that don't require job costing features.

KIS Payroll for Windows
Setup of this software was very easy and fast. Help is available through the the control menu and through a feature called the "Advisor" which guides the user through the setup, the steps of a payroll run and the procedures that should be completed before the next payroll run. Earnings and deductions features are called up with a simple mouse click on the selected options.

You can scan through time cards to modify hours worked and scan additional earnings screens to enter vacation pay or other non-periodic earnings. A payroll may be recalculated, amounts can be overridden and cheques can be printed as often as necessary for the payroll to be correct.

Reporting flexibility is good. It allows you to select reports and audit trails for viewing on the screen or printing with a click of the mouse. The program also has good import and export capabilities.

Pay-Calc
Pay-Calc is an inexpensive, easy-to-use program that has many of the features of more expensive programs. It guides you through the setup process and will not let you enter any time data until setup is complete and correct. Earnings, benefits and deductions are also easy to setup. A new feature this year allows you to print the calculation when entering data on an employee to see if the calculation option gives the desired result.

There is an "unposting" feature available to correct errors found after posting of the cheques. Pay history retention is good and the reporting is flexible. The manual is online and help is context sensitive. The product can be downloaded from the Web site and used for one year free of charge.

PayMate for Windows
This package is full of features and easy to use and set up. PayMate is compatible with most popular accounting packages. Context sensitive help is at your fingertips. A feature called Tips and Techniques has been added to the help menu to guide you through setup and error recovery procedures. This product will batch time cards for quick set up and review of payroll entries. The pay is calculated from the default information and, as the hours are modified on the pay form, the paycheque is changed before your eyes.

Reporting is very comprehensive with good pay history retention. In the setup for job costing, payroll costs can be made to include benefit costs. Overhead costs can also be added. Many human resource manage-

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ment fields have been added. PayMate Plus has excellent reporting features and is extremely flexible. It can be downloaded from the Web and used for free for 90 days.

Window to Payroll

Window to Payroll allows definition of custom earning and deduction codes and interfaces with many general ledgers. We liked the user interface with its large buttons and flow chart approach to payroll processing. With its Workers Compensation calculations and multiple union reporting, it is a good solution for job costing and union environments. The company also offers an Export to General Ledger package, a Direct Deposit Upgrade, a Union Upgrade, Time Clock Import, Remote Data Input and Point to Point Data Entry as well as custom programming.

Part 2:

Integrated Windows and Mac software with Canadian payroll

Integrated programs offer a complete accounting solution. They usually include general ledger, accounts payable, accounts receivable, inventory control, job costing and payroll. We have reviewed and commented on only the payroll component for this report.

Accpac Simply Accounting

This application, available in English and French, is very easy to set up and use. The fully integrated payroll module is complete and simple. The payroll handles manual and computer cheques as well as after-the-fact payroll. Payroll errors can be adjusted using the adjust-cheque command—the program prepares the adjusting entries for you.

Simply Accounting retains two years of detailed information. Although earning and deduction types are limited, the program calculates Workers Compensation amounts and prints T4, T4A and Releve 1 forms. Simple job costing is also available. Electronic funds transfer is now available from a third-party developer, Conamex International and the Toronto Dominion Bank (and is scheduled to be available to all Canadian banks by Dec. 1). In order to customize paycheques or other reports, a separate report writer is required, either CA RET, which shipped with earlier versions of Simply Accounting, or Crystal Reports 5.0 or greater, which must be purchased separately.

Dynacom Accounting 2000 Advanced Edition

Here is a fully bilingual integrated accounting package including Canadian payroll, making it a good choice for business and non-profit organizations needing project and/or job costing in Quebec. The payroll is very flexible, allowing for unlimited earnings, deductions and benefits and maintaining accruals. We found the user interface to be a bit awkward and not entirely intuitive with no pop-up descriptions for icons. It provides all the basic reports and forms for statutory deduction reporting, prints ROEs and offers a report generator for custom reporting. It lacks only the specialized calculations and reports included in the more expensive stand-alone payrolls.

M.Y.O.B. Accounting Plus

This is a single user fully integrated accounting package for small- and medium sized businesses available for both Macintosh and Windows environments. M.Y.O.B. Premiere Accounting is the multi-user version available only in Windows format. Both products ship with an extensive help and reference library on CD-ROM and each provides Wizards for ease of setup.

M.Y.O.B. allows a large number of very flexible earnings and deductions. As a result, it requires a good understanding of the payroll process when setting up. The program tracks payroll history by months and quarters rather than by payroll periods and does not track insurable hours or print a record of employment. Some reports and forms are customizable. Both versions of M.Y.O.B. offer OfficeLink, which allows integration between accounting data and Excel, Word or WordPerfect. This is a good program for organizations requiring job or departmental costing and a very flexible payroll solution.

Continued on page 128

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WHAT'S NEW

Continued from page **106**

cialist Storm Technology, Inc has filed a voluntary petition for relief under Chapter 11 of the U S Bankruptcy Code Storm has been pushing the technology-price envelope with such products as the first USB scanner announced in June, and an under-US$200 flatbed scanner announced in September Storm recently licensed some patented technology to competing scanner vendor Visioneer the patents for which it had acquired from Logitech Company officials said the firm regretted having to file but had decided it was the firm's best chance to "achieve financial stability going forward

Storm, http://www.stormtech.com

Processor-based oven unveiled

FREMONT, Calif (NB)—Just when you thought the microprocessor industry was no longer heating up one Silicon Valley developer has raised the temperature again with the Wolf/FlashBake 120 oven, which utilizes a microprocessor-controlled halogen light to cook food faster than in a conventional oven

Quadlux Inc., officials said the oven is designed to cook food that has the taste and texture of a meal cooked in a conventional oven in about half of the time needed by traditional appliances.

The product is not meant to compete head-to-head with Microwave machines Quadlux said as the oven was designed to prepare previously uncooked meals not reheat frozen dinners.

The firm said that its FlashBake technology has been used in the commercial sector since 1993 but that the Wolf/FlashBake 120 will be the first countertop model that can plug into any standard 120-volt outlet It will also be available in wall mounted models, Quadlux said. The developer indicated that it is hoping the oven will appeal to professionals that prefer the taste of traditionally prepared meals but who do not have the time necessary to cook.

Quadlux spokesmen said the oven is preprogrammed to apply energy at different times during the cooking cycle to penetrate and cook from above and below, depending on the food or cooking mode chosen

According to the firm, the oven can bake, broil steam, grill roast and saute Cooking with light also provides flexibility to brown, caramelize and sear foods with no preheating required, Quadlux said.

The oven will be available through the FlashBake Web site

The suggested retail price for the Wolf/FlashBake 120 is US$1 500 to US$1 700 Quadlux spokesmen said

FlashBake Tel 800-THE-OVEN
http://www.flashbake.com

IBM security smart card for laptops

RESEARCH TRIANGLE PARK N C (NB)—IBM has announced a PC Card-based smart card security kit that can keep unauthorized users from accessing information on notebook computers

The IBM Smart Card Security Kit, to ship by press time will include security software a smart card and a smart card reader installed in a notebook PCMCIA Type II slot

"Protecting sensitive data with a mobile workforce is a great concern for many companies today" said Kevin R Barry general manager of IBM's PC options and peripherals. He described the system as "virtually tamper proof"

In practice, a user inserts a personalized smart card and then enters a four-digit personal identification number (PIN) to access the machine To disable access the user removes the smart card which puts a secure screen saver onto the display and disables all input devices until an authorized card is reinserted and validated by the PIN

Joe Preaser IBM's product manager for the kit, acknowledged that the kit would in effect, remove one PC Card slot from a laptop since the smart card must be in place in the slot, to use the computer to operate Newsbytes notes this makes the kit less useful for single PC Card machines

IBM says the kit s smart card reader/writer device uses Gemplus GemSafe technology and RSA cryptographic technology It includes support for Security Dynamic's SoftID digital signature capability a security luggage tag, and Norton s anti-virus protection program

The IBM Smart Card Security Kit has an estimated reseller price of US$199

IBM http://www.ibm.com/pc/us/accessories

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Sibelius comes to Windows

LOS ANGELES Calif (NB)—While the British Acorn PC never captured much of the U.S. market, many musicians kept one on hand for use with a single program written for it—Sibelius musical notation software Now Sibelius has been ported to Windows

A Mac version is planned for introduction in early 1999 and a children s version should appear in late 1999 according to Saverio Mancina, who acts as marketing partner in North America.

Named for Finnish composer Jean Sibelius, the software was written by twin brothers Ben and Jonathan Finn who both compose music and write software They chose to write for the Acorn because it was the fastest platform they could find at the time The two wanted to remove some of the "manual grind" from the process of composing music

The program quickly became a favorite among musical types both amateur and professional According to Mancina San Francisco Symphony director Michael Tilson Thomas has kept an Acorn machine on his desk ever since he found the program.

The software bears a fairly hefty price for a desktop machine—US$499 Academic and theological users qualify for a discount to US$299 Asked if it might not make sense to drop the price to more consumer-friendly and typical Windows levels, perhaps under US$200, Mancina pointed out that the program's only competitor, a program named Finale, costs only $50 less.

"Professionals are more than willing to put down that kind of money for this product, and in any case it's certainly less expensive than having to buy a whole new Acorn computer just to use it "

Sibelius also allows publishing directly onto the World Wide Web To listen to a composition over the Web, the company offers a free, downloadable plug-in that allows scores to be viewed transposed and played

Sibelius, http://www.sibelius.com

What's New is written and compiled by Jeff Evans, Megan Johnston, Keith Schengili-Roberts and David Tanaka

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BASICS							
Product Name	**Easypay**	**Integrated Office Payroll For Windows**	**H.E.L.P. Payroll for Windows**	**KIS Payroll for Windows**	**Pay-Calc**	**Paymate**	**Window to Payroll**
Version	1.0	1998 MC-04	Beta	4.5	4	2.02	2.06.07
From	EasyPay Software Company	MTW Solutions Online Inc	Help Software Services Ltd	KIS Information Systems Inc	Maple Software Ltd	AK Microsystems	Time Frame Software Inc
Address	1733 Heritage Way Oakville, ON L6M 3A2	201 3071 14th Ave Markham, ON L3R 0G1	226 Fulford Ganges Rd Saltspring Island, BC V8K 2K7	101-0518 Government St Penticton, BC V2A 4W6	519-120 George Henry Blvd North York, ON M2J 1E2	88/245 W Beaver Creek Rd Richmond Hill, ON L4B 1L1	201 17 Colborne St. E., Box 9 Orillia, ON L3V 1T4
Telephone	905-825-8020	905-940-3398	250-537-1100	250-490-3117	416-491-3922	905-771-1158	705-329-4077
Fax	905-825-9660	905 940-0000	250-537-1170	250-490-3317	NA	905 771 1344	705-329-2091
Web site	www.easypay.ca	www.mfsol.com	NA	www.kispayroll.com	www.paycalc.ca	www.akmicro.com	www.time frame.on.ca
SYSTEM REQUIREMENTS							
Operating system	Windows	Windows 3.1	Windows 95/98 or NT	Windows 3.1	Windows 3.1 >	Windows 95 or NT	Windows 95 or NT
Processor (min./recommended)	486/Pentium	386	486/Pentium	386	486	486	486DX/Pentium
MB of RAM (min./recommended)	4/8	4	16/32	4	8	16	16/32
MB of hard disk space	10	8	NA	1.5	NA	NA	20
PRICE							
Program	$495	$495	$[illegible] (suggested) beta product	$495	$15[illegible] (1-50 employ.) $256 (51-400 employ.) $365 (multicompany)	$488	$495
Updates and maintenance	$100/yr	$100/yr (tax tables)		$125/yr	$100/yr	$240/yr	$300/yr
Support	Included with update	$50/incident	Call help line	Incl. with updates	Free (one-year trial)	NA	NA
FEATURES							
Multiple companies	Y	Y	Y	Y	N. Y. See above	Y	Y
General ledger departments	Y	Y	Y	Y	N	Y	Y
Job costing	Ltd	N	Y	N	N	Y	Y
Multiuser/network	Y	Y	N	N	N	Y	Y
Multi EI rates per company	N	Y	Y	Y	Y	Y	Y
Password Protection	Y	Y	Y	Y	Y	Y	Y
Interfaces with general ledgers	Y (many)	Y Integrated Office Accounting	Y	Y	N	Y (many)	Add on ($99.95)
Number of items per employee							
Earnings/types	20	Unlimited	Unlimited	24 inc benefits	8	30/50 with add on	Unlimited
Benefits	20	Unlimited	Unlimited	NA	8 Benefits &	10/15	Unlimited
Nonstatutory deductions	60	Unlimited	Unlimited	15	Deductions	20/50	Unlimited
Automatic calculation formulae							
for earnings	N	Y Ltd	N	Y	Y	Y	Y
for benefits	Y	Y Ltd	N	Y	Y	Y	Y
for nonstatutory deductions	Y	Y Ltd	Y	Y	Y	Y	Y
for GST on taxable benefits	N	N	N	N	Y	N	N
Support for priv. benefits and taxes	Y	Y	Y	Y	Y	Y	Y
Manual cheques	N	Y	Y	Advances only	N	Y	Y
After the fact pay	Y	Y	Y	N	N	Y	Y
Tracks advances	Y	Y	N	Y	Y	Y	Y
Calculates accruals	Y	Y	Y	Y	Y	Y	Y
Banks hours	Y	Y	Y	N	Y	N	N
Calculates Worker's Compensation	N	N	Y	N	Y	Y	Y
Automatic indexing	N	Y	N	N	N	Y	N
Retains payroll history for prior years	Y	Y	Y	Y	Y	Y	Y
Allows extra tax deduction	Y	Y	Y	Y	Y	Y	Y
Time clock interface	Y	N	Y	N	N	Add on	Add on ($99.95)
Direct deposit interface	Y	Y	Y	N	N	Y	Add on ($99.95)
User defined fields	N	Y	N	Y	N	N	N
[illegible]							
Customized cheques and advices	Y	Y	N	Y	Y	Y	Y
Prints laser cheques	Y	Y	Y	Y	N	Y	Y
T4's T4A	Y	Y	Y	Y	Y	Y	Y
T4 summary form/report	N	Y	Y	Y	N	Y	N
Record of employment form/report	Y	Y	Y	Y	Y	Y	Y
Releve 1	Y	Y	Y	Y	Y	Y	Y
Cheque register	Y	Y	Y	Y	Y	Y	Y
Payroll journal or register	Y	Y	Y	Y	Y	Y	Y
Employee's detailed pay history	Y	Y	Y	Y	Y	Y	Y
Month end report for G/L	Y	Y	Y	Y	Y	Y	Y
Employee's year to date report	Y	Y	Y	Y	Y	Y	Y
Employee profile	Y	Y	Y	Y	Y	Y	Y
Insurable earnings report	Y	Y	Y	Y	Y	Y	Y
Statutory deduction report	Y	Y	Y	N	Y	Y	Y
Other deductions report	Y	N	Y	N	N	Y	Y
Job and/Department report	Y	N	Y	Y	N	Dept/Job/Cost	Y
Direct deposit report	Y	Y	N	N	N	Y	Y
Cheque reconciliation report	Y	Y	N	N	Y	Y	Add on
[illegible]							
Ease of installation	Easy	Easy	Easy	Very easy	Easy	Easy	Easy
Ease of setup	Easy	Easy	Easy	Easy	Easy	Extremely easy	Easy
Ease of use	Easy	Easy	Easy	Easy	Easy	Extremely easy	Easy
Ease of adjustment	Easy	Very easy	Easy	Easy	Easy	Easy	Easy
Programmed backup & restore	Y	Y	None	Y	Y	Y	N
Data entry screen appearance	Clear	Easy to read & use	Easy to read and use	Easy to read & use	Good	Very clear	Clean and clear
Personnel management info	None	Limited	None	Some	None	Excellent	Some
General flexibility	Good	Good	Good	Good	Good	Good	Excellent
Reporting flexibility	Good	Good	Good	Good	Good	Excellent	Excellent

Canadian payroll software—*integrated systems*

BASICS					
Product name	Aecpac Simply Accounting for Windows	Dynacom Accounting 2001 Advanced Edition for Windows	MYOB Accounting Plus & MYOB Accounting Premier Accounting	Peachtree Complete Plus Time And Billing	Quickbooks Pro Intuit
Version	8.0	3.0.2	Plus 7.0/Premier 1.0	8.0	5.0
Firm	Aecpac International	Dynacom Technologies	BestWare Canada	Peachtree Software	Intuit Canada Ltd
Address	5405 Airport Rd Mississauga, ON L4V 1W5	202-1965 Cote de Liesse Saint-Laurent, Que H4N 3A8	218A 1425 Dundas St. E Mississauga, ON L4X 2W4	1505 Pavilion Pl Norcross, GA 30093 See Web site for Canadian info	4206-2025 Sheppard Ave. E Willowdale, ON M2J 1V8
Telephone	800 773-5445	514 745-5360	800 840-8902	250-216-3727	888-881-1722
Fax	905-678-6711	514-745-0054	905-824-7329	250-285-3727	NA
Web site	www.aecpac.com	www.dynacom.ca	www.myob.com	www.peachtree.com/company	www.intuit.com
[illegible]					
Operating systems	Windows 3.1/95	Windows 3.1/95	Macintosh and Win 3.1/95 Premier is Windows only	Windows 3.1/95	Windows 3.1/95
Network systems	None	Net BIOS, Novell compatible or Windows workgroup network	All Net BEUI and Net BIOS	NA	None
Processor (min./recommended)	486	486/Pentium	386/486 or Mac Plus	486	486
MB of RAM (min./recommended)	8	8/16	4/8	12/16	8/16
MB of hard disk space	25	NA	5	30-40	20
PRICE					
Program	$178	$195	Plus $109 (Mac $229) Premier $690 for 3 users $149 ea for additional users	Peachtree Complete $395 Complete plus Time and Billing $410 Canadian Payroll $149/yr	$240 Less $65 for Quicken or Quickbooks user
Updates, maintenance & Support	3 free calls in first 30 days $100 per year	$89-$249/yr 30 days free	Maintenance & tax tables $179 Premier: free for 6 mos Annual fee of $340	30-day free support 60 day unconditional guarantee Tax tables included in the [illegible] $149 fee	Multiple plans Unlimited telephone (long distance rates apply) Priority $25 per incident Other plans available
FEATURES					
Multiple companies	Y	Y	Y	Y	Y
General ledger departments	N	N	N	Y	Y Classes
Job costing	Y	Y	Y	Y	Y
Multiuser/network	N	Y (Unltd. # of users)	N/Y (Premier)	Y	N
Multi EI Rates per company	Y	N	N	N	Y
Password protection	Y	Y	Y	Y	Y
Number of items per employee					
earnings/types	5	Unlimited	Unlimited	20	Unlimited
Benefits-company contributions	2	Unlimited	Unlimited	0	Unlimited
Nonstatutory deductions	8	Unlimited	Unlimited	22	Unlimited
Automatic calculation formulas					
for earnings	N	Y	Y	Y	Y
for benefits-company contributions	N	Y	Y	Y	Y
for nonstatutory deductions	N	Y	Y	Y	Y
for GST on taxable benefits	Y	N	Y	Y	N
Support for provincial benefits and taxes	Y	Y	Y	Y	Y
Manual cheques	Y	Y	Y	Y	Y
After the fact pay	Y	Y	Y	Y	Y
Tracks advances	Y	Y	N	Y	N
Calculates accruals	Y	Y	Y	N	Y
Banks hours	N	Y	N	N	Y
Calculates Worker's Compensation	Y	N	N	N	Y
Automatic indexing	N	N	N	N	N
Retains payroll history for prior years	Y (1 year)	Y (statistical for 5 yrs)	N	Y	Y
Allows extra tax deduction	Y	Y	Y	Y	Y
Time clock interface	N	N	N	N	N
Direct deposit interface	Y (add on)	N	N	N	N
Calculates pension adjustment for T4's	N	N	N	N	N
User defined fields	N	N	N	Y (5)	Y (15)
[illegible]					
Customized cheques and stubs	Y	Y	Y	Y	Y
Prints own cheques	Y	Y	Y	Y	Y
T4's T4A	Y	Y	Y	N	Y
T4 summary form/report	Y	Y	Y	N	Y
Record of employment form/report	N	Y	N	N	Y
Releve 1	Y	Y	Y	N	Y
Cheque register	Y	Y	Y	Y	Y
Payroll journal or register	Y	Y	Y	Y	Y
Employee's data and pay history	Y	Y	Y	Y	Y
Employee's year to date report	Y	Y	Y	Y	Y
Employee profile	Y	Y	Y	Y	Y
Insurable earnings report	Y	Y	Y	N	Y
Statutory deduction report	Y	Y	Y	Y	Y
Other deductions report	Y	Y	Y	Y	Y
Job cost/department report	Y	Y	Y	Y	Y
Cheque reconciliation report	Y	Y	Y	Y	Y
PERFORMANCE					
Ease of installation	Easy	Easy	Easy	Dow[illegible] Web	Easy
Ease of setup	Extremely easy	Easy	Fairly easy	Tax deductions awkward to set up	Easy
Ease of use	Extremely easy	Awkward	Fairly easy	Easy	Easy
Ease of adjustment	Extremely easy	Poor	Very easy	Easy	Easy
Programmed backup & restore	Y	N	Y	Y	Y
Personnel management information	N	N	Good	Y user defined fields	Y user defined
General flexibility	Some	Good	Excellent	Good	Excellent
Reporting flexibility	Some	Good	Excellent	Excellent	Good
Screen appearance	Easy to read & use	Could be improved	Easy to read & use	Easy to read & use	easy to read & use

Charts legend

The accompanying charts represent an attempt to compare costs, services features and options for the programs. NA indicates where information was not available. The following descriptions clarify some of the features are described here for clarification.

Multiple companies: Allows processing of payrolls for more than one company.

Job costing: Means the program will record units of time and amounts to a job and provide job-cost reports. The more complex products calculate and expense benefits and other overhead to the job.

Interfaces with general ledger: Most payrolls provide a general ledger report or a general ledger interface text file that contains journal entries summarized by account number, department number and amounts. Some products reviewed are integrated directly with a complete accounting system.

Number of items per employee: Many products have a limited number of earnings, benefits and non statutory deductions available per company or employee.

Automatic calculation formulas: User-definable formulas for the calculation of earnings, such as vacation accruals, commissions or piece work and non-statutory deductions, which are calculated on selected earnings or groups of earnings or other amounts.

Tracks advances & calculates accruals: Track advances and accruals maintain a record of an advance paid or an accrual, such as holiday pay until it deducted or paid.

Banks hours: A feature in some programs is the ability to bank hours or units for sick pay, statutory holidays or time off.

Automatic indexing. Automatic indexing of employees TD1 claim by the annual cost of living adjustment is now a feature included in some payrolls.

Direct deposit interface: A file can be sent by the program to the bank for entry into the bank's direct deposit system.

Printing and reports: Some payrolls will not print directly on all government forms. As an alternative they print a report that can be transcribed onto the government form.

Detailed pay history report: Lists each earning and deduction for each employee by pay period and totals to the year to date total.

Year to date report: Shows the year to date amount of all earnings, benefits and deductions for each employee.

Employee profile: Shows employee name, address, birth date, start date and other personnel information.

Ease of setup: When a payroll is easy to set up the user can quickly configure the pay frequencies and the earnings and deductions or they are pre-configured.

Ease of use: In easy-to-use payroll programs the process of entering time sheets and calculating the payroll is very simple and straightforward and look-up boxes are available for the selection of data to enter.

Personnel management information: Refers to availability of fields for tracking vacation and sick days, family info, and other relevant data. A free form screen or user definable fields are often available.

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SYSTEM SPONSOR

Canadian payroll software
*Continued from page **124***

Peachtree Complete Accounting
This is a fully integrated program for small and medium sized businesses. It comes with U.S. payroll, but Canadian payroll addition can be downloaded from the company Web site. Helpful hints come from the Smart Guide that pops up when you choose a function. Canadian tax deductions were awkward to set up. Not so for earnings and deductions, which also allowed some calculations.

There are five custom fields of 40 characters for tracking personnel or other payroll information. Paycheques can be batched or prepared one at a time. It has a good job costing component.

We did not like the fact that some field names are only appropriate for U.S. payroll purposes. This program does not process T4s or ROEs and does not bank hours or allow for accrual of vacation or sick time.

QuickBooks Pro for Windows
This is a fully integrated accounting package for small- to medium-sized businesses. The payroll module is very easy to set up and use and offers unlimited earnings, benefits and deductions. Pop-up instructions guide you through the screens and functions, and can be turned off when they are no longer needed. Reporting is very complete and history retention is good. The product offers project tracking, time tracking and job costing, and timecards entries can be used for both invoicing and payroll.

You can edit invoice and paycheque hours and the original records remain intact. You can elect to view earnings and deductions prior to generating a cheque or you can review a list of the names and amounts to be paid and generate a batch of cheques. Like most of the newer products, it has an integrated personnel management function. Intuit has included a forms layout designer and a multiple forms feature. This program provides a low-cost complete accounting solution in one box with a payroll system that is as good as many of the stand-alone products. ❑

Prepared by Joan Hornal and Nancy Humm of PC Professionals and Joan V. Hornal & Co. Inc., companies providing computer consulting, accounting, auditing and tax services to small- and medium-sized businesses in Vancouver.

Mars: Mankind's Future Lies in Space
NB—Described by the site designers as "the most comprehensive Mars site on the Web," this site includes lots of information on the "red planet." It's intended as an educational site and is designed for use with Internet Explorer although Netscape Navigator users will be able to access most of the content. It is also feature-rich in multimedia, like VRML, RealVideo and animations. It is also a semi-final entrant in the Thinkquest '98 Web site creation contest.
http://library.advanced.org/19456

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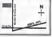

The search for bigger PC sound

SonLab PC audio kits offer range of price, performance

By Jeff Evans

As a long time PC owner, I've had occasion to have to replace my PC's speakers several times, due to the hazards inherent in domestic computing (stampeding pets snagging cables, treasured offspring cranking the volume dial up to 11, etc.). The dilemma has always been: what quality of audio do I really need, and what price am I willing to pay?

SMP 5 Combo Pack
CS-SW3 180W Power Subwoofer kit
Distributed by: SonLab (available at Radio Shack and other retailers)
110 Ferrier St., Markham, ON L3R 2Z5
http://www.sonlab.com
Suggested retail price: $34.95 (SMP-5), $99.95 (CS-SW3)

It used to be simpler in the old days. When I started using my Compaq portable PC in 1984, all it could produce in the way of sound was "beeps" and "boops," and the tinny little 1.5-inch speaker built into the case was fine. By the mid 1980s, the 2.5-inch speakers inside my Commodore Amiga computer monitor were about right to play back the 8-bit sound the Amiga was capable of creating.

Today, however, it's almost impossible to find desktop speakers that do justice to the quality of sound that can be produced by the best 3D stereo sound cards from Creative Labs, Yamaha, or other quality sound card makers. On a positive note, at least we have a much wider range of PC speaker choices today, ranging from low-priced utility speakers, to audiophile quality systems. We just have to choose wisely.

Recently, we looked at two packages from SonLab, a major supplier of speakers to the PC industry. One is a budget speaker set, the SMP 5 Combo Pack, and the other a premium speaker set, the CS-SW3 180W Power Subwoofer kit. To establish a rough baseline for comparison, we used the set of JBL Pro speakers that come with the Compaq Presario MV 700 multimedia monitor as an example of a mainstream consumer PC speaker set.

The JBL speakers consist of two speaker units that plug into the audio line-out on a Compaq Presario PC's sound card and which do not require an external power supply. Volume can be controlled by buttons on the Presario's keyboard.

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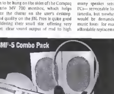
(a very nice feature) and the JBL Pro units have little lugs on their chassis that allow them to be hung on the sides of the Compaq Presario MV 700 monitor, which helps reduce the clutter on the user's desktop. Sound quality on the JBL Pros is quite good considering their small size, offering very bright, clear sound output of mid to high frequencies, though noticeably a bit weak in bass output.



In comparison, the SMF-5 Combo Pack's two small speakers produce somewhat fainter but still audible sound. If one attempts to turn up the volume more than halfway, there is noticeable hissing and distortion. In addition to the two small speakers, the SMF-5 Combo Pack comes with headphones for private listening, and a microphone with a flexible neck and mounting base for voice input and computer telephony.

The SMF-5 offers the quality typical of many speaker sets found on entry level PCs— serviceable for basic gaming and multimedia, but nowhere near the quality that would be demanded by a discriminating music lover, for example. This set is a very affordable replacement for the standard low cost speaker set found on many clone PCs but is not to be considered an "upgrade."

The SonLab CS-SW3 is another matter entirely. Consisting of a large heavy subwoofer base unit and two nicely finished 7.6 cm (3 in.) 4-Watt speakers, the CS-SW3 offers a considerable upgrade in audio quality compared to the JBL Pro speakers. The kit comes with a power adapter, all necessary cables and a set of rubber feet to protect the surface the subwoofer rests on.

Audio quality remained good across the spectrum from low to high frequencies even at high volume settings, and in particular the unit handled heavy bass settings well. For the PC gamer, DVD or computer audio enthusiast on a limited budget, the CS-SW3 is a good choice, offering considerable audio output quality for a very modest price. ❑

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Logitech enhances QuickCam

By Sean Carruthers

It has taken portable digital photography a while to really catch on with those of us who aren't professional photographers But when it comes to tethered devices it's been a different story

QuickCam Pro

From Logitech
http://www.logitech.com/Cameras/index.html
Price US$149

Starting with slightly fuzzy black and white pictures, the QuickCam has evolved over the four years since its introduction incorporating color and allowing larger and higher-quality pictures In the process, the QuickCam has sparked a revolution Skeptics proclaimed that it was a bit Big Brother-ish having a digital eye always pointed in your direction, but since its introduction Connectix has sold over one million QuickCams. Apparently people liked to be watched!

In August the QuickCam line was purchased by Logitech, a company already noted for excellence in devices that plug into the back of the computer. Shortly after the acquisition of the line, Logitech announced the release of the new QuickCam Pro and a number of new features to go with it

First among the features is a swivel base with a grip clip meaning the camera can be pointed in almost any direction and attached to anything less than 2.5 cm (1 in) thick. Instead of placing the camera on the desktop or on top of a monitor, users can now clip it to a bookshelf or to the top of the TFT screen on a notebook computer. The camera can then be aimed in the proper direction using the swivel base For those so inclined, the camera portion can also be detached from the swivel base and mounted on a tripod

The second new feature is the new versions. Previously, the QuickCam was available only as a parallel port device which could cause problems when the device shared the port with a printer (attach detach, reattach, detach, etc) The QuickCam Pro is now also available with universal serial bus (USB) connectivity, which eliminates sharing problems. Parallel versions of the camera require the user to attach a passthrough cable to the keyboard port to power the cam The USB cam, on the other hand, gets its power directly from the USB port which means installation of the camera is as simple as plugging its cord into the USB connector

The third big advantage to this new incarnation of the QuickCam is the included software The QuickCam Pro images are automatically processed by the PictureSmart application to eliminate barrel distortion, they are adjust for lighting conditions, and colors are made to appear more natural

The software also corrects a longstanding complaint users have had with the QuickCam. how to get the captured pictures to a Web server For users with a Web page incorporating camera captures taken at regular intervals transferring those pictures on a regular basis meant doing it manually or purchasing a shareware utility that did the same thing automatically This function is now built in with the new software

Continued on page **155**

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Don't copy it, clone it

TCP looks at drive copying utilities

By Rod Lamieand

With hard drive prices being so good and storage needs always growing, it's not uncommon for individuals or small businesses to pick up a big, new, drive. But when they get to the computer, they ask, "what's the best way to add it to my system?" Well, you could install it as an additional drive and leave the current hard drive in place but you probably want the newer, faster, bigger model as the main hard drive.

One way to achieve this is to save all your data. Install in the new drive and reinstall all your programs. There is merit to this plan. Operating systems collect junk and develop problems over time. It's healthy to start from scratch and clean everything out. However, if you have ever performed this operation you know it can be a time consuming and difficult exercise.

But there is an alternative: a disk cloning utility which makes an exact copy of your hard disk contents.

Disk cloning

Disk copying is a simple concept. Add a second drive, copy the data to the new drive, make the new drive the boot drive. You can even do this without cloning. Just add the drive and copy everything over to it, then remove the old drive and set up the new one as the C: drive. The problem is—when you copy files and folders to the new drive, all sorts of things can get messed up. Having done this a number of times over the years I can attest to the fact that it is often simpler to save the data and start over with the new drive.

Disk cloning utilities copy the actual structure of the disk's surface from one drive to another and not just the data in a file or folder. Cloning is a simple solution, which will work if the two drives are identical. However, it is usually the case that the physical structures (the number of cylinders, tracks, and heads) of the drives are not identical. What makes cloning software of value is that it analyzes the target hard drive then adapts the data being transferred to fit the new hard drive.

Common features

To copy the drive it must not be in use. Thus these programs all boot from a floppy so that the hard drive is not running—you cannot open a DOS box and clone a drive.

Whenever you are cloning you need to know the jumper settings of your hard drives. Many drives indicate the master/slave/cable connect settings on their cover but some do not. You can usually get this information from the Web page of the drive's manufacturer, even for old drives. This information can also be found in the drive's manual and on specialized Web pages like http://www.ontrack.com.

HD connectors

Most computers built in the last two to three years have two IDE connection points on the motherboard. As you probably know, each connection point is simply two rows of 20 pins labeled Primary IDE and Secondary IDE (sometimes there are only 19 pins because one of the centre pins is left out to ensure correct orientation when the ribbon is inserted). Older machines only have one IDE connection point. These two plug-in points each accept an IDE ribbon and can each support two devices—meaning you could install up to four hard drives. Other devices—such as a

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DVD or CD ROM drives—can use the ribbon but the total number of devices can only be two on each ribbon. As well, each device must either be master or slave.

For example, on my test system I added a new Maxtor Fireball on the Secondary IDE connection because the Primary IDE ribbon couldn't reach it. The new drive had to be the slave because a Creative Labs Encore DVD drive needed to be the master. This left me with my original drive as the master on the Primary IDE connection. Later during these disk cloning evaluations, however, I made the Fireball the slave on the Primary IDE ribbon and still later I made it the master. When making these switches, you must remember to do the following: change the drive's jumpers when you change it from master to slave or vice versa, be sure the new C: drive is bootable if you don't want to start from scratch, and you reassign the drives in your BIOS to make it all work.

Fortunately, the products below make this procedure fairly simple.

For this review I had intended to review DuoCor's XactCopy, which clones your hard drive to a second drive then hides it from the operating system. This means you always have a copy of everything mirrored on the second drive. The idea is interesting and allows for fast, automatic backups; however, the product caused problems on my system. I contacted the company and representatives asked that I review version 2.5, which is soon to be released and should be improved. *The Computer Paper* will do so, but at this time it is not a product we recommend purchasing.

DriveCopy Version 2.0
From: PowerQuest Corp.
PO Box 1911 Orem, UT 84059-1911
Tel. 800 379 2566 http://www.powerquest.com
Estimated street price: $44.95

DriveCopy, from PowerQuest—the maker of Partition Magic—is a hard drive copying program that will work with Windows 3.11, 95

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DEALING WITH YEAR 2000

The Year 2000 problem, Y2K, or millennium bug, originates with software and microchips that use two digits instead of four to represent a calendar year. When the year changes from 1999 to 2000, technology that uses two digits will change from 99 to 00. Computer programs may misinterpret 00 as 1900 and give incorrect data or stop working altogether.
If your business has even one computer, you could experience business disruptions on January 1, 2000.

NOT JUST A PROBLEM FOR BIG BUSINESS!

Many owners of small and medium size businesses believe the Year 2000 problem only affects large companies with complex networks and customized software packages. The Reality (whether you have three PCs or 300), the millennium bug can potentially cripple your computer operating system, software and networks, jeopardizing vital links with customers, business partners and suppliers.
Increasingly, business and government require their suppliers provide proof of Y2K compliance as a condition for doing business.

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98, NT 3.51 and OS/2. The software comes on a CD-ROM but runs from a floppy that you must create. When you boot to the floppy the program loads a mouse driver so you can easily navigate the graphical interface. Three choices are offered on the screen: drive information, drive copy, and partition copy.

In my tests the program successfully copied from my 2.1 GB drive to a 3.2 GB drive. However it was necessary to exit the program, reboot and scan the C: drive to get rid of a few lost clusters (the most common reason for lost clusters is turning off your computer without exiting Windows). I would have thought DriveCopy could have automatically correct this but perhaps there is insufficient space on the floppy disk for another applet.

When DriveCopy copies a partition from one drive to another it checks to see if the target drive is larger. If it is, the program completes the copy then expands the partition to fit. This saves you from having to buy a program like Partition Magic or Partition It. Another great feature is that DriveCopy is quite safe. It is designed so that a hardware or power failure during an upgrade will not destroy any data. With this program it is also possible to copy selected partitions if the drive is partitioned.

DriveCopy is not a program to copy a hard drive for installation in different computers. It could be done, if the other computers were exactly the same as the original, but this might violate copyright law and if any components were not identical there would be conflicts. (PowerQuest makes a product DiskImage that allows for multiple drive copies. It can be purchased for personal or business use.)

A limitation of DriveCopy is that it will allow a user to copy a hard drive using Netware, Linux, UNIX and other systems but will not expand the partition to fill a larger drive and is not supported by PowerQuest technical support. Overall, this is a simple, easy-to-use, and stable utility that I recommend.

DiskClone Extra Strength

From: QuarterDeck Corp
13160 Mindanao Way
Marina del Rey, CA 90292-9705
Tel: 800-683-6696 http://www.quarterdeck.com
Estimated street price: $88.95

DiskClone Extra Strength from QuarterDeck is an excellent utility. Aside from copying your old hard drive to your new one, the diminutive program will also make an image of your drive and save it to a Zip, Jaz or SyQuest storage drive. Like DriveCopy above, DiskClone will also allow you to resize the new partitions to any size that can contain the data being moved. DiskClone can copy Windows 3.x, DOS and OS/2, 16-bit FAT and FAT32 as well as, NTFS, HPFS, Novell and UNIX partitions

(although a UNIX copy will require that the new drive have the exact number of sectors and heads as the original).

I tested the program's drive copy abilities but I also made image files to both SparQ and Jaz drives. The procedure is a bit more difficult than it sounds because you must first get the drivers for your storage device on the boot disk or you will not be able to access the peripheral. Fortunately QuarterDeck includes a utility that asks if you have such a device during installation. If you do, it loads generic drivers on the floppy, which worked perfectly for the SCSI Jaz 2 GB and fairly well for the parallel port version SparQ 1 GB (the program hung a few times but without doing any harm).

The benefit here is that you could use the image file as a backup copy of the operating system. You can save an image across multiple cartridges such as ZIP disks, making it possible to return the computer to perfect working condition even if your storage device is smaller than your drive. Obviously you would lose any data not backed up since the image file was made. It is even possible to save the image file to CD-ROM if you have a CD-ROM burner. With new computers able to boot to CD-ROM, it is possible to insert a CD-ROM and return your machine to its original configuration. In fact, some Compaq laptops come with such a CD-ROM allowing users to always easily return the computer to the state it was upon arrival.

DiskClone allows the user to install the new drive as a slave and then, after the disk copy, change it to the master or, install the new drive as the master and then copy to it. Either way the product will get your drive copied in about 20 minutes for a 2 GB drive. QuarterDeck is offering an excellent utility—but in a box that is far too big for the 3.5-inch floppy diskette it contains.

Norton Ghost

From: Symantec Corp
895 Don Mills Rd., 500 2 Park Centre

Continued on page 141

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ISPCon 98 Report

Tone of conference reflects vitality of Internet service provider industry

By Douglas Alder

I attended the recent Internet Service Providers Conference (ISPCon) in San Jose Calif., which has always been different from broader Internet shows that draw much of their audience from Internet users. ISPCon is solely for the people who build the network for the Internet—the Internet service providers (ISPs).

From an informal survey at the opening session, about two thirds of the 5,000-plus attendees represented true ISPs. Around 5 percent indicated they had entered the ISP industry in the last year.

The host

Every trade show is made of three groups of participants: the host, the hunted, and the hunters. Often the host of a trade show or conference is some grey corporate entity.

ISPCon is quite different and is sponsored by *Boardwatch* magazine (http://www.boardwatch.com). It was recently purchased by Meckler Media (http://www.mecklermedia.com), publisher of *Internet World*. *Boardwatch* was launched in 1987 to cover what was then the computer bulletin board industry. As the industry rebuilt itself into the ISP business, the magazine grew to become the bible of that industry in North America.

Editor and the conference's master of ceremonies Jack Rickard personifies both the magazine and ISPCon. He is opinionated, sometimes cantankerous, and controversial—frequently taking contrary points of view on the direction of the ISP industry that, in hindsight, are often right on the money. A former engineer, he can swap acronyms with the best of them and his nitty gritty information keeps the magazine on the required reading list for business managers and techies alike.

The hunted

Although ISP representatives came from all over the world, only about 15 percent were from outside the U.S.

Forced to deal with dicey software, flaky routers, constantly changing modem standards and technology that is really too new to work very well, ISPs manage to keep most of the connections open.

The big dream of many ISPs is the legendary buy out, and many came to hear about cashing out. The most popular sessions at the conference were about evaluating ISP businesses or finding capital to buy out other ISPs. A number of people I spoke with mentioned their growing fear of the aggressive competition coming from cable and telephone companies. Some said they feared that the years of rapid growth might be coming to a close for smaller companies.

The hunters

At many computer trade shows it is relatively easy to categorize the vendors, but ISPCon was more of a challenge. With more than 200 exhibitors spread over 55,000 square feet, the show floor was impressive. The booths were big and well-marked, but exactly what was being sold or promoted was often a mystery. The most mysterious displays were for services to ISPs.

Hardware and software were easy to identify. Pricing was harder to extract, because it is often based on some variable determined by the sales rep.

Some of the products were quite esoteric. One example was a company called iAtlas (http://www.iatlas.com), which sells what it calls "traditional business data" combined with information gleaned from InterNIC and other Internet sources and compiles them. This is then sold to ISPs and other industries.

Hot boxes

One booth had ISPs lusting after its sleekly designed translucent, rack-mounted Internet servers. The Cobalt RaQ microserver, runs Linux and Apache Web servers and sells for under US$1,000 with a 2 GB hard drive and 16 MB of RAM.

This was particularly attractive for small businesses or startup ISPs that want to put up a self-contained Internet presence complete with Web site, email and ftp. These units don't require a monitor. Users configure an IP address on the side of the box and then all future administration is done from a Web browser on another computer.

Cobalt (http://www.cobaltnet.com) has done a nice job of hiding the complexities of Linux and Apache behind its administration tools. From the demo I saw it certainly looked like an effort reducing combination. While users can buy cheaper computers as servers, the Cobalt offers a nice package using open source software with a slick configuration utility. The beauty of its package is that there is no additional software to buy.

Another hot box that should appeal to ISPs was from Transcend (http://www.transcendmodems.com). The box offers voice, data and Internet in and up to 24 ports in a small red box for about $200 per port. This type of product is also available from 3COM and other vendors, but usually starts at a higher range, with a minimum of 96 or more ports.

Integrated messaging

One conference buzzword was integrated messaging, which allows faxes, voice mail and text messages to be channeled to a users' email account. From there it can be read with any Web browser or pushed out to pagers or cell phones that support text displays.

Farther up the food chain, some vendors offered text to speech, so a user could call in from any telephone and have their mail read

Continued on page **138**

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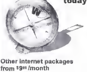

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out to them, or punch a few buttons and have faxes redirected to a local fax machine

One of the most comprehensive and correspondingly expensive solutions was from MediaGate (http://www.mediagate.com) From the demos I saw I predict this offering may be slow in coming as it requires a substantial investment in equipment that will probably depreciate quickly Partial solutions were cheaper but it seemed like customers might require a fair bit of tech support

Also worth a look was Nascent Technology's Mailspinner (http://www.mailspinner.com), E-Centric (http://www.e-centric.com) OfficeDomain's MessageASAP (http://www.officedomain.com) and N Plex WebExpress (http://www.isocor.com)

Software

An Australian company Ixla (http://www.ixla.com) showed an interesting software package called WebEasy The package was like a low-end version of Fusion NetObjects. For around US$50 customers get a wizard-driven program that quickly puts out attractive Web sites

WebTrends (http://www.webtrends.com) seems to make one of the more popular Web site log analyzing programs. Most Web servers have a log program that tells administrators a variety of information about who visits their Web sites where they come from and what pages they view WebTrends reads the log and formats the information into a set of standard reports complete with graphs and charts

E commerce simplified

Another theme of the show was e-commerce A number of software vendors have created packages that simplify this process Most products focused on the low end of the e-commerce spectrum, what is referred to as a brochure site Vancouver-based Multiactive Technologies (http://www.multiactive.com) offers a program called ecBuilder Sitematic Corporation (http://www.sitematic.com) offers a similar product

Sort out trademarks

Thompson & Thompson which claims to be the leader in international trademark and copyright services has created a Web site to help sort out trademark problems associated with domain names. It offers a free service for companies and individuals who want to establish a Web presence It ties the InterNIC domain name registration database to a database of international trademarks Users can get a free sample of the information by logging on to http://www.namestake.com

The sessions

This year ISPCon had 226 sessions that addressed concerns in a few distinct categories. technical and standards-based challenges, marketing topics, such as how to increase profits from the same customer base increasing company growth how to sell an ISP and the ongoing threat from cable and telephone companies—this year in the form of digital subscriber lines (DSL) and Internet provided by cable

DSL

DSL is the next generation of technology offering higher speed connections to the Internet

Originally designed for video on demand DSL is based on silicon technology digital signal processing algorithms, and existing copper wire telephone lines It is similar to but much faster than ISDN or 56Kbps modems

The speed of DSL has many users anxiously waiting for it to become available in their area. The catch in many areas is that telephone companies have to improve their lines to meet the high standard required to run DSL. The process is taking a while because it often involves the telcos making changes at their switching stations

Many ISPs fear the advent of DSL because they are being crowded out of offering it to users by a technical requirement DSL only can travel 6 km or less from the central telephone office

Users won't see DSL modems in local computer stores soon Because they are an end-to-end solution DSL modems are most likely to be supplied by the ISP or telephone company providing the DSL service Phone companies are somewhat ambivalent about rolling out DSL because the required investment in improvements cuts into lucrative contracts with business customers

In Canada DSL will be offered in two main flavors, one priced under $100 for consumers and one for business users starting at around $400 according to Parm Gill vice-president of Cyberus Online (http://www.cyberus.com) DSL can reach download speeds of up to 7 Mbps. The consumer offering will be limited to 2 Mbps Business offerings will be staged at 2, 4 and 7 Mbps, ranging up to around $800 a month

The buzz on Linux

Linux is the rising star in operating systems. It lays claim to being the only operating system that is actually gaining market share against the Microsoft behemoth

Written originally by Linus Torvalds Linux is a free UNIX based operating system that runs on many platforms. It has been developed with assistance from users all over the world Torvalds and the developers insist that the operating system and software can be used or improved upon by anyone as long as the source code is kept open and free Torvalds, who spoke at an ISPCon luncheon guessed that between 10 and 15 million copies of Linux are now in use worldwide

The big news on the Linux front is that Intel and Netscape have invested in Red Hat Software (http://www.redhat.com) Red Hat packages the free Linux operating system with its own software and sell it for $50. The investment was more strategic than financial by having market leaders Netscape and Intel express their support Linux gains an air of legitimacy

"Since July the five leading providers of database software Oracle, Informix Computer Associates Sybase and IBM have all announced plans to support Red Hat Linux OS," said Robert F Young, president of Red Hat

Many ISPs use Linux because it's free Arshad Merali of Aracnet, a Toronto-based ISP said his company used both Linux and Windows NT and that the combination of Linux and Apache Web servers is hard to beat because the software is free

Conclusion

It was a great conference about an extremely dynamic industry Four years ago the ISP business did not exist Four years from now it could be gone, with most of the companies absorbed into a few large ones or it could be even bigger than it is today ❏

Douglas Alder (douga@smartt.com) is the founding editor and publisher of *The Computer Paper* Since leaving the publication in the fall of 1997 he has been traveling with his family and pursuing his interest in computers.

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MP3: the next audio frontier?

If last year could be considered the year audio first broke onto the Web with RealAudio, then this is the year of the MP3

By Keith Schengili Roberts

MP3 audio files are typically one tenth the size of the audio files you'd find on a regular CD while providing near CD quality sound. Compressing such good sound into such a small space is perfect for downloading over the Net. This audio format may well become the audio format of choice someday—if the music industry allows it.

What is an MP3?

MP3 is the popular name for a layer-3 MPEG file. It uses a very efficient algorithm to compress an audio file to about 10 percent of its normal size. A typical full-stereo song on a given music CD requires roughly 10 MB of space per minute of music, meaning a typical four to five minute pop song is about 40 to 50 MB.

The very size of these files is a major disincentive for anybody who wants to copy a music track and send it to a friend—even with a 56Kbps modem and a good connection, it will take a long time to transmit. But what if you could send the same file to your friend in one tenth of the time?

These programs are known as "rippers" because they are capable of "ripping off" the sound from a CD

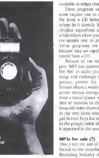
For things like mono recordings or spoken-word recordings (which typically do not have to be heard at the same fidelity as music) the compression can go even further, fitting an hour long show onto a space that could fit onto a few floppy diskettes.

Given their small size, decent sound quality and the relative cheapness of CD recorders, it is quite possible to get well over 100 MP3 format pop songs—or about 10 album's worth of material—onto a single CD-R disc.

This is the sort of thing that makes many record companies cringe.

Making your own

It is relatively easy to make your own MP3 files from your CD collection. Simply download the appropriate software from the Net, put your CD in your CD-ROM drive and by the time you go and get a cup of coffee



Diamond MultiMedia's Rio MP3 player

you'll have an MP3 file to listen to when you get back. Programs that do this include WinDAC, audiograbber, CD-Copy, CDDA, MusicMatch and MP3 Producer, most are available as either shareware or trialware.

These programs vary in sophistication—some require you to create a separate WAV file from a CD before compression, while others do it directly. Some use slightly more efficient algorithms to create the MP3 file while others allow you to set parameters, like the sample rate, to produce a better sound. These programs are known as "rippers" because they are capable of "ripping off" the sound from a CD.

Because of the wide availability of rippers, MP3 has spawned a large following on the Net as audio pirates make requests for songs and exchange them on Usenet newsgroups, private ftp sites and Web sites. Several album's worth of material are posted across various newsgroups every single day. Even a casual glance will reveal a wide selection of material to choose from, everything from old radio shows to '50s rockabilly tunes to the very latest releases. In fact one intrepid Beastie Boys fan managed to post a copy of the group's latest album a full week before it appeared in the record stores.

MP3s for sale (?)

This is not the sort of thing that endears the format to the recording industry. In fact the Recording Industry Association of America (RIAA) has taken steps to limit the spread of MP3 files. It is currently asking many of its recording artists to lend their name to sign

Continued on page 142

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Download some indoor entertainment

By Scott Swedorski

Believe it or not and winter is the peak Internet browsing season ISPs and Web sites consistently report much higher traffic during the colder weather months Why? Well it's obvious that indoor play time is preferred to outdoor playtime when you have to wear four layers of clothes just to go outside So with that in mind we found some fun entertaining and useful distractions to help you get through the next few months.

Corkboard

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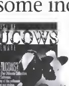
Version 1.00.069
Revision date June 17 1998
Filename corkb100.exe
Byte size 2 208 231
Licence type Freeware
Home page http://www.polynamics.com/Corkboard/
Also available Windows NT version

An excellent alternative to a screensaver, Corkboard is a screen saver desktop memo board and entertainment program that turns the desktop into a realistic corkboard You can post objects sticky notes calendars to-do lists thumb tacks and various decorations all of which can be customized Corkboard has some limited network capabilities allowing you to pull "pranks" on other Corkboard users on your network



Desktop Themes

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Version 1.69
Revision date July 5 1998
Filename desktopt-tucows.zip
Byte size 115 841
Licence type Shareware
Cost $15
Home page http://www.lys.com.au
Also available Windows NT version

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InfoScout Movie Browser

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Version 2.0
Revision date Aug 21 1998
Filename infoscout.exe
Byte size 2 978 907
Licence type Shareware
Cost $19.95
Evaluation period 30 Days
Home page http://www.vqplus.com
Also available Windows NT version

A movie review browser for Windows specifically designed to keep you current with the latest movie releases. InfoScout Movie Browser automatically ships the latest movie review database by movie title critical rating, actor director or film critic. All matches are saved on your hard drive so you can browse at your leisure.

InCogNeeto

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Version 4.0
Revision date Sept. 1 1998
Filename incoplyr.zip
Byte size 1 113 942
Licence type Freeware
Home page http://bigmog.net/incognito/
Also available Windows NT version

InCogNeeto allows you to create a 10-question multiple choice quiz complete with a photo of yourself and a Web site address that you define As players are answering your questions your photo is being unveiled one piece at a time After they complete the quiz and have viewed your photo, the game gives them a logo to click on and instructs them to click and go to a specially designed Web site

Kali95

🐄🐄🐄🐄

Version 1.54
Revision date Sept 2 1998
Filename k95_154.exe
Byte size 2 582 252
Licence type Shareware
Cost $20
Evaluation period 15 min./session till registered
Home page http://www.kali.net
Also available Windows NT and Mac versions

Kali is a state-of-the-art TSR (terminate and stay resident) program that allows Internet users to play IPX (Internet packet exchange) network compatible games across the Internet With Kali users with Windows 95, NT, DOS, Mac and OS/2 can participate in the same multiplayer game The current version has compression support the ability to disable the windows keys on your keyboard free software updates, and more than 200 000 players, 600 servers, and 100 games in 65 countries

PC Leagues Administrator

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Version 1.1.0
Revision date July 14 1998
Filename pcadmin.exe
Byte size 4 886 528
Licence type Freeware
Home page http://www.pcleagues.com/
Also available Windows NT version

PC Leagues Administrator is an excellent sports league administration program that allows you to create an online resource that shows players coaches, referees, league sponsors and much more This revolutionary software also provides you with an easy-to-use environment as well as point and click access to organize leagues assign players to teams create your season's schedule in addition to many other options.

Realms of Despair

🐄🐄🐄🐄

Version 1.0
Revision date Aug 29 1998
Filename realms32.exe
Byte size 270 864
Licence type Freeware
Home page http://www.game.org
Also available Windows 3x Version

This is the Windows client for one of the hottest MUDs (multi-user dungeons or role-playing games) on the Net Realms of Despair. Designed

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for the beginner, It is simple to use, has full ANSI color support, clickable directional arrow pad, handy macro buttons and back scroll

Starry Night Basic

Version 2.1.2
Revision date Sept 4 1998
Filename strynt.zip
Byte size 4 708 875
Licence type Shareware
Cost: $34
Home page http://www.siennasoft.com
Also available Windows NT version

Starry Night allows you to view any planet from anywhere in the world or the solar system! This excellent celestial viewing program lets you view where planets are in the sky during the current night or day as well as allowing you to view their locations in the past, present or future. Starry Night is an excellent application for amateur astronomers.

Universal Lottery

Version 2.19
Revision date Aug 15 1998
Filename lotterywin.zip
Byte size 1,804 841
Licence type: Shareware
Cost, $14.95
Home page. http://www.winsite.com/ win/pc/win95/games/ulslt219.zip/
Also available Windows NT version

Universal Lottery can be set up to choose lottery numbers for many different types of games With this, you can even track your wins and losses

Mac Picks

Avara

Version 1.0.0
Revision date Sept 17 1998
Filename avara.hqx
Byte size 3,215 543
Licence type Shareware
Cost $20
Home page. http://www.ambrosiasw.com/Ambrosia_Products/Avara.html

Avara's real time graphic action will start your heart pounding as you see your opponent gracefully bound across the terrain and quickly swoop in behind you Using both the mouse and keyboard you have complete 360-degree control to counter maneuver and quickly target your enemy. Players aren't limited to sliding around in predetermined mazes like in many older 3D games Avara's maneuverability is unique allowing its warriors to freely climb jump, and run on any of the structures in the battlefield Avara allows you to meet and play against people from all around the world right over the Internet

Bolo

Version 0.99.7
Revision date Feb 11 1998
Filename tucows_bolo.hqx
Byte size 1 121,498
Licence type Shareware
Cost: $25
Home page. http://decked.me.duke.edu/bolo/

One of the first non-text-based, Internet-playable games is still one of the best This is a strategy tank game that can be played over and over again It's easy to learn but can take forever to master The version posted here has been updated by a volunteer team of Bolo enthusiasts and also includes the latest game finder and help files

Netris

Version n/a
Revision date June 1 1997
Filename netris.hqx
Byte size 308 791
Licence type Freeware
Home page
http://www.nuviewstudios.com/gmg/netris/
Also available 68 KB version

Netris is a Tetris clone that can be played over the Internet You can connect through TCP/IP directly to your playing partners anywhere in the world ❑

Don't copy it, clone it

Continued from page ***134***

Toronto ON M3C 1W3 Tel 888-GHOST 98
http://www.ghost.com http://www.symantec.com
Estimated street price US$18.95 each (25-99 seats)

Norton Ghost is a disk cloning program originally from New Zealand Symantec bought the product and is currently integrating it into its line of utilities. The program is primarily a business application as you can see from the pricing Norton Ghost is priced on a per use basis. A company decides on the number of computers they want to clone and the licence is priced accordingly I am mentioning it in this review because the product is quite interesting and a consumer level version is being prepared

Like most other disk cloning programs Norton Ghost will copy FAT and NTFS partitions but it will also copy an image to a removable storage device (CD ROM Zip or SuperDisk drive) or even a network server. It can even copy a drive from one machine to another via network or LPT ports. Ghost can copy also OS/2 partitions and retain long filenames in Windows 95 or NT

This boot disk DOS program has a typically Spartan yet utilitarian GUI (graphical user interface) Batch mode, individual file restoration SCSI tape support and small footprint features make the program rich yet streamlined. The manual is also excellent

Norton Ghost also comes with a SID (Serial Identification) changer application called Ghost Walker that allows you to clone Windows NT This does not mean you don't have to pay for the copies. The program makes deploying a large number of NT installations easier but you must still pay Microsoft At this time Norton Ghost is a product for IT professionals but in the near future you may see it as a standalone consumer product

Conclusion

If you buy a new drive and want to transfer your current setup to it, listen to the voice of experience and get a disk cloning program like one of the ones reviewed here ❑

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MP3, the next audio frontier?

Continued from page 139

an Internet Anti Piracy Statement, which in effect covers the illegal distribution of MP3 files. Artists who have already gone on the record include Sara McLachlan, Mick Jagger and Barry White. In addition, the RIAA actively seeks out pirate MP3 Web sites with the intention of shutting them down and protecting the copyrights of the artists they represent.

However, while most record companies have problems with the way the MP3 format is being used to distribute copyrighted material over the Net, many individual artists and small record labels have embraced it. Many new up-and-coming bands have found the format to be ideal to distribute free samples of their songs widely, cheaply and easily.

One of the main boosters of the MP3 file format is MP3.com, which has links to over 80 labels distributing a multitude of artists who are freely distributing samples of their music over the Web. MP3.com even has Top 40 MP3 files from artists who have agreed to release their music in this format in various categories including Alternative, Classical, Comedy, Folk, Heavy Metal and many more.

Even a few established artists have taken an interest in the new music format, with the Beastie Boys and Primus offering whole songs to fans through their Web sites. Frank Black (formerly of the seminal post-punk band The Pixies) is represented by the Goodnoise record label, where people can either purchase a CD online, or download MP3 versions of the songs from his latest album at a discount.

MP3s flying down to Rio?

MP3s have definitely taken off amongst a certain crowd, but one thing that defines this group is that they all have computers. MP3s have not made any impact on the consumer electronic market—yet. Given the RIAA's position on MP3s in general, it is unlikely that you will see a collection of MP3 songs offered by a major record label at your local record store anytime soon.

Without this support, and despite the offering of compilation MP3 CDs by largely unsigned artists, it is unlikely that you will find any regular CD players capable of playing MP3s encoded onto a disc. Of course, all of this could change if there is enough demand for such devices. An early forerunner of such a device is Diamond Multimedia's portable Rio MP3 player.

Diamond Multimedia has plans to release the Rio, the first completely solid-state MP3 player to be sold in North America. Carrying a price tag of about US$200, this Walkman-like device allows users to listen to MP3s on the go—and because all of the MP3s are stored directly in memory, the only moving part is the "Play" button. The lack of moving parts means the music cannot skip.

The tiny device, which measures 8.9x6.3x1.6 cm (3.5x2.5x0.625 in.), can play up to 12 hours of audio files from a single AA alkaline battery.

Recently though, the RIAA and the Alliance of Artists and Recording Companies had successfully placed a restraining order preventing Diamond Multimedia from selling or distributing the Rio. In a preliminary ruling, the court said the Rio violates the U.S. *Audio Home Recording Act*, enacted as a result of the risks posed by unauthorized digital copying of music.

Hilary Rosen, president of RIAA, said the Rio was "destined to undermine the creation of a legitimate digital distribution marketplace, and as such we remain committed to working together with companies that make portable digital recording devices for music, so that everyone benefits."

Just before press time, a U.S. court lifted the RIAA's restraining order. Judge Audrey B. Collins ruled that the Rio MP3 player was not a recording device, as alleged by the RIAA, and therefore did not fall under the restrictions of the *Audio Home Recording Act*. Pending any appeals or new legal motions, this allows Diamond Multimedia to sell the Rio freely in the U.S., its main target market. On the heels of the court ruling, Samsung announced the imminent launch of its own portable MP3 player, called the Yepp.

While this technology is generating a lot of work for lawyers, there is still work being done on the format itself. There are already successor formats—MP4 and a competing AAC (Advanced Audio Coding) format—are just becoming available now. Both promise better fidelity in an even smaller file size. However, the eventual success of MP3 (or any successor) will ultimately depend on its acceptance by the general consumer market. ❑

Some MP3 information sites

MP3Bench: The Definitive MP3 Benchmark
http://www.mp3bench.com/
MP3.com: The MP3 Resource on the Internet
http://www.mp3.com/
The Official FAQ for alt.binaries.sounds.mp3
http://www.lap.net/taanus/
Goodnoise: http://www.goodnoise.com (record label that sells MP3s)

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Design In Motion for print, Web

Macromedia suite fuels healthy competition in graphics market

By Peter Milburn

Competition is good. And never has this been made more evident than in the graphics rivalry between Adobe, Corel and Macromedia.

Design In Motion Suite
From: Macromedia Inc.
http://www.macromedia.com
Recommended Mac system requirements: Power Mac, System 7.1, 60 MB hard disk space, 64 MB RAM, CD-ROM drive, PostScript printer
Recommended PC system requirements: Pentium, Windows 95/NT, 60 MB hard disk space, 64 MB RAM, CD-ROM drive, PostScript printer
Retail price: $530 (FreeHand), $230 (FreeHand upgrade), $770 (Design in Motion Suite), $470 (Design in Motion Suite upgrade)

Pros: Fast performance, Web support, transparency and lens effects, support for Colorsync and AppleScript, cross-platform file compatibility
Cons: User interface conventions are sometimes odd; palettes take a lot of screen real estate on smaller monitors

Since 1988, Macromedia and Adobe have engaged in a perpetual struggle of upgrade one-upmanship between their flagship illustration packages, FreeHand and Illustrator. To add more fuel to the fire, CorelDraw has also recently entered the Mac marketplace.

Today, all three packages have Macintosh and Windows cross-platform compatible versions that keep raising the bar on features and functionality. This tripartite battle can only bode well for graphics professionals.

> FreeHand 8 is the primary component of the suite, and is the most significant upgrade that Macromedia has made to the product since its first release

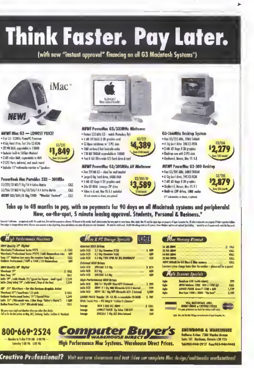
Unique features

Macromedia's Design In Motion Suite is actually three separate software components in one package. The products are designed to work in tandem and integrate the disparate mediums of print and Web publishing.

FreeHand 8 is the primary component of the suite, and is the most significant upgrade that Macromedia has made to the product since its first release. With input from graphic design professionals, the company has put its emphasis on adding Web functionality, making workflow more natural and efficient, and implementing some advanced features that aren't available in its competitor's products.

Foremost among FreeHand's new and unique features is support for lens fill effects such as true vector-based transparency. Transparency effects were previously only achievable in pixel-based image editors such as Photoshop. But as any graphic artist can tell you, it is laborious and time-consuming to make opacity changes to these types of images. More often than not it involves having to recreate the piece from scratch. Thanks

➤



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to some marvelous software engineering feats at Macromedia, creating, editing and printing true postscript transparency effects is now an effortless task.

In another attempt to recreate pixel-based effects in vector-based drawing FreeHand has introduced a feature called a Graphic Hose

Another whiz-bang feature that falls under the category of a lens-type of effect is the ability to overlay any vector shape on top of other objects and create a magnification effect from 2x up to 20x. This feature alone is extremely useful to graphic artists that specialize in cartography or creating infographics for print, video or the Web.

In another attempt to recreate pixel-based effects in vector-based drawing, FreeHand has introduced a feature called a Graphic Hose, which bears a striking similarity in implementation to the Image Hose in MetaCreation's pixel-based software package called Painter. Any object that is part of your documents or stored in a FreeHand library can be digitally "sprayed" onto your page using palette variables such as ordering, spacing, scale and rotation. The variables can also be interactively changed using keyboard controls while the hose action is taking place. For example, you can narrow and widen the spacing of the sprayed objects using the left and right arrow keys.

Graphic Hose is one of many effects grouped under Xtra tools—the FreeHand equivalent of Adobe Illustrator's filters. Macromedia's package provides other unusual effects such as a mirror for creating symmetrical effects and a 3D effect Xtra that makes 2D objects appear rotated.

Enhanced productivity

But FreeHand 8 isn't limited to esoteric effects in this upgrade. Macromedia has made a huge effort to streamline the professional graphic artist's workflow by concentrating on features that speed workflow and enhance the creative process.

For starters, Macromedia claims to have improved performance by an average of 25 percent over the previous version. As a comparison test with Adobe Illustrator 7.01, I opened a file containing over 5,000 objects with complex blends. I used a 300 MHz G3 Power Mac and assigned a 64 MB partition to each package. FreeHand opened the file in only 8 seconds, which was more than twice as fast as Illustrator.

However, previewing the same file from a keyline view took 13 seconds in Illustrator, which was almost twice as fast as FreeHand. To save the same file to disk took only 23 seconds in FreeHand, which was over a whopping four times faster than Illustrator. I also noticed that this test file was almost half the size in FreeHand (12 MB) than it was in Illustrator (20 MB).

Improving user visual feedback also enhances learning and productivity. To this end FreeHand has introduced the concept of "smart cursors" into version 8. This is a con-

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cept that has been in CAD packages for years and is long overdue for illustration software.

Let's say you draw a path using the free form tool and later want to reshape it. Placing the cursor directly on the path in FreeHand puts a squiggle shape beside the cursor to indicate that the path can be pulled out. If the cursor is placed just outside the path a small circle appears beside the cursor to indicate that the path can be pushed inward to reshape it. As with the Graphic Hose, you can use interactive keyboard modifiers to change the radius of the path portion you are reshaping.

Interactive transformations are another feature that save you the hassle of having to open dialog boxes when you don't require numeric precision. Double-clicking on any FreeHand object reveals a special set of handles on it. Placing the cursor on or near any of these handles will change its shape to reveal an appropriate transformation mechanism such as a move, scale or rotate operation. Simply holding the mouse button down while dragging it in the desired direction will start the transformation process.

Those graphic artists who like to personalize their work environment will appreciate FreeHand's comprehensive ability to customize the user interface. Similar to packages such as Microsoft Office and ClarisWorks (now known as AppleWorks), FreeHand contains toolbar sets that can be edited, changed between horizontal and vertical orientations, or switched on and off. Toolbars can also be transformed from static screen positioning to a floating palette. Also, every FreeHand command can now be assigned its own keyboard shortcut.

In addition to the Macintosh/Windows cross platform compatibility, Macromedia offers superb integration with other graphics packages. The Export command offers almost two dozen unique formats that not only let you exchange files with Illustrator, CorelDraw and Photoshop, but also let you save to many other formats including JPEG, GIF, Flash and PNG Web standards. Recent version 8.1 upgrade enhancements included improved Photoshop 5 compatibility and enhanced Flash support.

Web tools

Most graphic designers used to working with the print medium are now also designing for the Web. FreeHand 8 was designed from the ground up to address this workflow issue. Macromedia offers the designer a complete package of integrated tools known as the Design In Motion Suite. The suite includes FreeHand 8, Insta HTML and Flash.

Insta HTML is provided as a utility to facilitate the conversion of FreeHand files into WYSIWYG HTML code. The latest version supports Dynamic HTML (dHTML) with absolute positioning and Cascading Style Sheets.

As any digital graphic artist knows, it can be a real pain to make scaling changes to pixel-based JPEG and GIF images on a Web page. As a result, Macromedia decided to implement a PostScript-to-HTML parser standard called Flash. In essence, Flash does for Web graphics today what PostScript did for print publishing starting in the 1980s. It enables the designer to use compact, scalable, resolution-independent and anti-aliased vector graphics on a Web page.

Of course, the only catch to all of this is that you have to use a Flash plug-in with your Web browser. In an effort to make this technology a Web standard, Macromedia has released the plug-ins into the public domain. You can download them at the company Web site for free. Some more notable sites that use Flash technology include Disney's Daily Blast, a site for Fox TV's *The Simpsons* and, of course, Macromedia.

FreeHand 8 contains a "release to layers" plug-in that simulates the effect of "onion skinning" so you can easily create animations. The Flash player included with the suite allows you to play back and export these animations.

The bottom line

The Design In Motion suite tools work in concert to aid the professional print designer in repurposing content for the Web. Macromedia has taken the lead in this arena, and Adobe—as evidenced by its recent release of Illustrator 8—is trying to stay hot on its heels.

This suite contains enough compelling features to make designers consider it as their premier illustration package. This is especially true if they spend a lot of time doing cartography, infographics and Web design—applications that are ideally suited to the new lens and transparency features. Die-hard Illustrator fans may also be lured into considering it a complementary weapon in their graphic software arsenal. Be prepared, however, to invest in the latest and greatest hardware if you want to heavily utilize the new exotic features FreeHand offers.

In the meantime it's good to see vigorous competition continuing to drive innovation in this software category. ☐

Peter Milburn is a consultant with Elite Systems Support located in Calgary, Alta. He can be reached on the Internet at elite.systems@shaw.wave.ca.

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Top 10 Beatles' Web sites

By Keith Schengili Roberts

Beatle-mania has been around for a very long time, and well before the advent of the Web there were plenty of fanzines, tributes and even stores devoted solely to celebrating this famous band from Liverpool. This has translated into a plethora of sites on the Web.

The following is only a small selection of the many Web sites devoted to these lads from Merseyside.

1. **Mining Co. Guide to Beatles Fans.** Robert Fontenot's site is a great shortcut to finding the better Beatle-oriented Web sites out there. All of the sites listed in this article (and many, many more) can be found there.
http://beatles.miningco.com

2. **Harald Gernhardt's Beatles Pages.** This URL is for the U.S. mirror site for Gernhardt's site—a true labor of love that is arguably the most comprehensive source on Fab Four bootlegged recordings to be found anywhere.
http://rga.simplenet.com/beatles/

3. **The Beatlemania Shoppe.** If you are looking for official Beatles stuff, you're most likely to find it at the Web site for this store located in Toronto.
http://www.beatlemaniashoppe.com

4. **Beatles Chords/Tabs.** If you are learning how to play your favorite Beatles song, chances are you will find the chords/tabs for it listed on this page.
http://www.mindspring.com/~stewarts/chord.htm

5. **Tragical History Tour—The Official Rutles Home Page.** This is the official Web page made by the Dave Haber dedicated to The Rutles, the Monty Python-esque band known as the Pre-Fab Four.
http://www.primenet.com/~dhaber/rutles/

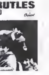
6. **William Campbell is Alive!** William Campbell supposedly replaced Paul McCartney after he "died." Created by the self-described Paul is Dead Fan Club's number one fan, this page looks at all of the "clues." Humorously comprehensive.
http://www.worldweb.net/~cbbs/ht/

7. **Abbeyrd's Beatle Page.** If you are looking for the latest news on The Beatles (not an oxymoron), you'll find it here. While not exactly an eye-pleasing page, it does have plenty of info.
http://www.best.com/~abbeyrd/contents.htm

8. **Bagism.** Web page devoted to John Lennon in the style of Lennon and Ono's "Baggism," which forces the user to be an active participant rather than be a passive observer. All the latest news, complete discography, chronology, art, quizzes and more about "the smart one."
http://www.bagism.com/

9. **The Internet Beatles Album.** Contains information on the various Beatles myths, portfolios on all of the individual Beatles, a Today in Beatles History section and plenty more. It also has a stunning opening page!
http://www.primenet.com/~dhaber/beatles.html

10. **The Breakup: 1970.** An article chronicling in detail the reasons and events behind the breakup of the Fab Four.
http://home.capal.net/outlook/beatles/articles/breakup.htm



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PC guide for newly wired families

By Keith Schengili-Roberts

Though computers and the Internet are great tools for education they can also be great time-wasters There are educational programs and there are mindless blast-'em-up games Similarly there are Web sites that are truly useful and those that offer little substance That is not to say all software programs or Web sites need to be useful to justify their existence but some of your computer time should be spent taking advantage of the truly extraordinary resources that lie at your fingertips.

The Plugged In Parent is a brief guide that helps give parents an action plan to make the most of their home PC A few years ago author Steve Bennett co-wrote the bestseller *365 TV Free Activities You Can Do with Your Child* You might think computers would be anathema to someone who frowns on television but here Bennett argues that with parental guidance PCs can become effective learning tools

Bennett points out however that a computer is not necessarily better than a television simply because it is more interactive For children to get the most out of the family computer parents must be willing to do some research and guide the child in computer usage

The book begins with an anecdote about the author asking parents assembled at a conference what they expect from a computer for their children. Many parents hoped for an educational advantage others saw it as a way to teach children crucial job skills, still others thought it would be a form of entertainment and an alternative to TV

Bennett provides some good general pointers on what to look for in a new computer and how to choose software He advises that parents and children should not get too involved with computers and cyberspace experiences. Buying a fish tank and filling it with real fish, he says provides important lessons that a virtual fish-tank program can never do

Easily the best section of the book is the section called "Connecting With Your Kids at the Keyboard." It outlines activities such as having a child find and report at least one interesting fact found while surfing the Web Other ideas for connecting activities presented include making digital road trips with your kids by constructing a Web page based on a family expedition guiding your child in the creation of simple games or creating and sharing art they made with friends All activities require active parent involvement.

Parents with some computing experience will find some of the topics redundant For a family in which both parents and children are new to computers, *The Plugged in Parent* will get them started in the right direction Overall the advice is sound and the activities are good but this book falls short when it comes to any real depth. ❑

The Plugged in Parent.
What You Should Know About Kids and Computers

WHAT YOU SHOULD KNOW ABOUT KIDS AND COMPUTERS
THE
PLUGGED-IN PARENT
STEVE BENNETT
AUTHOR OF
365 TV-Free Activities You Can Do with Your Child

Author Steve Bennett
Publisher Random House of Canada Ltd.
Tel: 416-777-9477 http://www.randomhouse.com/
Price: $21
ISBN: 0812963784
Softcover 187 pages 1998

Rating
Information content **1/2
Readability ****
Intended for Beginner
Overall Rating ***

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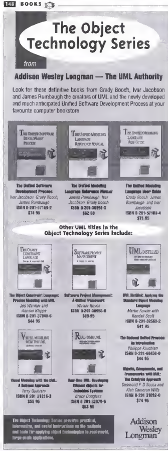

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A nearly complete guide to dHTML

By Keith Schengill Roberts

This book was written because author Danny Goodman could not find a single reliable resource that detailed the use of the various elements of dHTML (dynamic hypertext markup language), and how they are adopted (or not) in Netscape Navigator and Internet Explorer. His research into how Cascading Style Sheets, JavaScript HTML tags and other dHTML elements function in the two most popular browsers resulted in this book At more than 1 000 pages it is a daunting volume to pick up But despite the heft of this doorstopper, there no filler with a topic as vast as dHTML.

This is not a book for rank beginners. It assumes readers have prior knowledge of HTML essentials It also assumes they are not timid when it comes to understanding and using scripted programming languages like JavaScript

Goodman dives straight into the subject of the basic implementations of dHTML with

Continued on page 156

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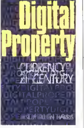
Lawyer outlines digital property rights

By Keith Schengili Roberts

With the online world becoming more and more a part of daily life and many forms of media becoming digital in one way or another, content is becoming increasingly important. Known in legal terms as "intellectual property," this content is increasingly becoming hot property and is driving many major corporate acquisitions. But what is intellectual property? How can you protect the intellectual property rights you have? Can you profit from it?



Digital Property
Currency of the 21st Century
Author: Lesley Ellen Harris
Publisher: McGraw-Hill Ryerson
Price: $22.99
ISBN: 0-07-552846-0
Softcover, 230 pages, 1998
Rating
Information content:
Readability:
Intended for: Beginner - Expert
Overall Rating:

These questions and many more are answered in *Digital Property: Currency of the 21st Century*, an excellent primer on the subject and a good, approachable guide to the ins-and-outs of intellectual property rights.

As *Digital Property* explains, intellectual property can be just about anything that can be digitized, including pictures, text, movies and sound. Because it is so wide-ranging, the potential to generate profits from intellectual property is huge for firms that can bridge the gaps between the analog-to-digital realms.

This has not escaped the attention of many industry leaders. Microsoft chairman Bill Gates, for example, is well on his way to owning the digital rights to the majority of images and text in the world.

Intellectual property has also driven traditional hardware firms like Sony to acquire a motion picture studio in order to access their back catalog of films, which will one day likely be digitized in some manner for CD-ROMs, DVDs or other future forms of media.

Digital Property is filled with many memorable anecdotes that illuminate the subject matter. Questions about digital property rights probably arose after publication of author Lesley Ellen Harris's first book, *Canadian Copyright Law*, which was a rather dry read.

While it does deal with how large corporations can benefit from intellectual property, it also focuses on how those who create content can benefit from and protect their own digital property. It outlines the rights of content creators, how these vary in different countries, where to sell work, the types of contracts to expect, and how to retain control over work.

Whether or not you run a business, or are a researcher, writer, educator, publisher or new media entrepreneur, this is the book for you. As the long-promised goal of convergence seems to finally be within sight, intellectual property will truly become the "currency" of the next century. ❑

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Weaving your own Web site: Part 39

Different positions: using Cascading Style Sheet positioning Part 1

By Keith Schengili-Roberts

One of the longest standing concerns about Web page design has to do with where something is positioned on a Web page. How many times have you been in a situation where you have wanted to add some image or text to a specific point on a Web page, and found this seemingly simple task trying your patience?

Over time Web designers have tried such tricks as transparent images and indented unordered list tags in order to get something exactly where they wanted it to be. A solution to this problem may finally be at hand with Cascading Style Sheet positioning (CSS-P).

CSS-P was initially devised as an extension to the existing Cascading Style Sheet (CSS) specification devised by the World Wide Web Consortium (W3C) and has more recently been adopted within the successor CSS2 specification. All of the acronyms aside, CSS-P may be the solution Web page designers have long been waiting for. What's more, because you can place something exactly where it should appear on a Web page with simple scripting elements, you can get them to move and disappear as well.

Look where you are positioned

You can position elements in CSS using the position element. The position element has three modifiers: absolute, relative and static. All of these modifiers can use the standard measurement values associated with typical CSS elements: centimeters (cm), inches (in), millimeters (mm), picas (pc), pixels (px) and points (pt). Because of the specific nature of the positioning element with reference to a computer screen, the default measurement value is pixels.

The absolute modifier is the easiest to understand and is typically used the most. When you use position: absolute, your element is positioned absolutely with reference to the top-left corner of the computer screen. In other words, the top-left of your browser window represents the coordinates 0,0, and you position your element with reference to that value. If you want to position an image to appear 250 pixels over and 100 down, you could write the following code:

```
<IMG SRC="bed.gif" STYLE="position:absolute;
left:250; top:100">
```

This means that the top-left corner of the image bed.gif is positioned 250 pixels to the right and 100 pixels down from the top of the browser window.

With the relative modifier you can specify where you want an onscreen element in relation to a previously specified absolute reference. If I want to place some text adjacent to the previously specified image, I could use the following code:

```
<B STYLE="position:relative; left:110; top:20">Check
out the image above and to the left!</B>
```

This sentence is positioned 110 pixels to the left and 20 pixels down from the lower right corner of the image. The image (or any other onscreen element for that matter) is thought of as being in a box. The sentence box is positioned away from the bottom right corner of the previously positioned item. In essence, the relatively placed sentence considers the bottom-right of the image as its 0,0 co-ordinate, and positions itself relative to those co-ordinates.

These two examples might imply that you always have to position items to the left and down from any previous element on the Web page. While you can't use right or bottom to position an element, you can use negative values. If you want to position a caption underneath the image, you could use this code instead of the previous example:

```
<B STYLE="position:relative; left:-110; top:20">Check
out the image above!</B>
```

It is possible to use negative values with the absolute modifier to position elements so they only partially appear or are completely off of the screen (until you call for them, which comes later).

It is worth noting that the relative modifier is not supported in Internet Explorer 4.0 or the 5.0 Preview. Instead it treats relative as if it were absolute. If you try the last example line of code in Internet Explorer, you can expect to see most of the text (or all of it, depending on the size of the absolutely positioned image file) off of the browser screen.

The static modifier is the default value for the position element, and it essentially goes back to the normal flow of where things would normally appear on a page. There are only rare occasions when it is used as it cannot be modified, and the following two lines of code work in an identical manner:

```
<I STYLE="position:static">Back to the normal
flow!</I>

<I>Back to the normal flow!</I>
```

If you insert this line of code and view it in Netscape Navigator 4.x, it will appear to the immediate left of the image, and not as you might think, to the left of the previous sentence that was relatively positioned underneath the image.

The nice thing about the position attribute is that it has been adopted for use since the 4.0 versions of both Internet Explorer and Netscape Navigator. The only real drawback is that not everyone is using the most recent versions of these browsers. Since positioning can be a crucial structural part of a Web page, at the moment it is recommended that you go easy on using the position element.

The fact that you can make things disappear by using negative positioning means that it should be possible to make things suddenly appear by changing the value of the positioning element to correspond to an onscreen position. The only problem with this is that Netscape Navigator and Internet Explorer use different JavaScript handles; this means that you have to program a JavaScript program knowing that users will be using a specific browser. In most cases this is not an option, so what do you do?

Simple: Detect which browser is being used, then point to the proper code sequence suitable to that browser to animate a previously hidden element. But that's for next time. ❑

Keith Schengili-Roberts welcomes your comments, suggestions or HTML tips. Email Keith at robertsk@wave.home.com. Look for his new book on HTML, The Advanced HTML Companion 2nd Edition, co-authored with Kim Silk Copeland, now in bookstores. Previous articles in this series are at The Computer Paper Web site at http://www.tcp.ca/

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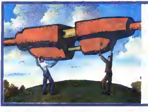

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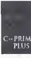

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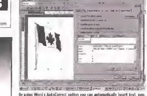
Automatic text and images

By Helen Bradley

This month we look at some options and tricks for automatically inserting text and images into your word processor documents. These options save you time by reducing the number of keystrokes required to complete a task.

Hands-free typing

The two Word 97 tools that we'll look at this month are AutoCorrect and AutoText. They are great ways of entering everything from text to symbols and images into your documents.



By using Word's AutoCorrect option you can automatically insert text, symbols and even images into your documents.

AutoCorrect is most often used to change spelling mistakes on the fly but you can use it for much more. When you encounter a typo while spell checking your document you can either select the correct spelling or type it in and select Change from the Spelling and Grammar dialog. But this only changes the highlighted typo. If you choose AutoCorrect instead of Change, Word will correct the selected typo and automatically correct it whenever the same mistake is made in the future. AutoCorrect is a real time saver if you often misspell a word or your fingers consistently hit the same wrong keys.

If you make a mistake and enter a word as an AutoCorrect entry and later decide you want to change it, select Tools, AutoCorrect, then the AutoCorrect tab. On the left of the two-column list are the "misspellings" and on the right the replacement words. Locate and highlight the entry you want to remove and press the Delete button.

You can also reverse an AutoText entry when Word makes the correction by pressing Alt + Backspace immediately after the change has been made. This reverses the individual entry which is useful when you only want to disable an AutoText entry occasionally.

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Smarter AutoCorrect

You can also use AutoCorrect to expand your shorthand. For example, if you often type the words Microsoft Office 97, you could make an AutoCorrect entry so that whenever you type "mo" for example, the letters are replaced automatically by the words "Microsoft Office 97." To do this, select Tools, Autocorrect, then the AutoCorrect tab. In the Replace box type "mo" and in the With box type "Microsoft Office 97," select the Add button and select Close. Test this entry by typing "mo" and pressing the Space Bar, comma, period or Enter key.

There are numerous uses for this function of AutoCorrect—your company name, your name, your boss's name, or other phrases or text that you type often. There is one proviso, however—make sure the shorthand text you're "correcting" is not a word in its own right. For example, never use "me" as shorthand for Microsoft Excel.

Quick lines

Word's AutoCorrect function can also do something that has previously been difficult to do in this program: create a line across the full width of a page. Before you try this, check that your Word 97 settings are correct by selecting Tools, AutoCorrect, the AutoFormat As You Type tab, make sure the Borders check box is selected, then click OK. Now, if you type any of these keystrokes at the beginning of a new line, Word will create a line the full width of the page.

Type this and press Enter	To get:
Five dashes ( )	a single line
Three equal signs (=)	a double line
Three pound signs (#)	a triple line
Three underscore lines (_)	a heavy line
Three asterisks ( )	a series of small squares
Three tildes (~)	a wavy line

And if you don't want the line you have made, press Alt + Backspace!

Smart quotes and numbers

AutoFormat also turns straight quote marks (") into smart or curly quotes marks ("). These curly quotes should be used in most writing as they give your work a more professional look. To turn this feature on or off select Tools, AutoCorrect, then choose the AutoFormat As You Type tab and select or deselect the "Straight quotes with smart quotes" check box. Most of the time you'll want smart quotes turned on, but sometimes (for example if you're preparing text for a desktop publishing program) you'll want to turn smart quotes off. Like any AutoCorrect function you can easily reverse a single change by pressing Alt + Backspace.

AutoCorrect will also automatically number paragraphs for you. Type a number, press Tab and type your text and Word converts the text into a numbered list. You can add other symbols to your numbers by typing a period, a hyphen, a closing parenthesis or a greater than symbol (>) after your number, then press the Spacebar or Tab key and type in the text. To stop the numbering simply press Enter twice.

There is a similar option to automatically create bullets for each paragraph. To try this type an asterisk, one or two hyphens, a greater than symbol (>) or an arrow (made up of an equal sign or a hyphen followed by a greater than symbol -> or =>) follow this with a space or a tab and your text. Word creates an automatic bulleted list and in most cases replaces the characters with proper arrows or bullets characters. Like the automatic numbered list, press Enter twice to end the bulleted list.

If you want to type a number or a bullet character but you don't want to create a list, wait until Word makes the change then press Alt + Backspace to undo it. You can turn these options on or off by selecting Tools, AutoCorrect, select the AutoFormat As You Type tab and select or deselect the "Automatic numbered lists" or the "Automatic bulleted lists" check box. Even with these options disabled you can create automatic numbered or bulleted lists by selecting the Numbering or Bullets button on the Formatting toolbar.

Automatic symbols and images

AutoCorrect already contains a number of symbols that will be generated automatically if you type certain key combinations, for

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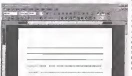
example type "(c)" for a copyright symbol (©) and type "(tm)" for the trademark symbol (™). You can see a list of the replacement options if you select Help Contents and Index, and look up "symbols, creating" and select Display. From the Topics Found dialog select "Create arrows, faces, and other symbols automatically."


The AutoCorrect options in Word 97 simplify creation of lines that are the full width of the page.

You can add your own symbols to the AutoCorrect list too. For example, add the cent symbol (¢) as an AutoCorrect option to an open document by holding down the Alt key as you type 0162 on the numbers keypad. Select it and select Tools AutoCorrect, select the AutoCorrect tab and the "Replace as you type" check box. In the Replace box type a character combination that you want to use for the symbol, for example "/c," select the Add button and select OK. Now every time you type "/c" the characters will be automatically replaced by the cent symbol (¢).

You can use this process to add symbols from the Wingdings font or any other symbol set. To see what is available, select Insert, Symbol, select the Symbol tab and browse the dialog until you find the symbol you want, select it and select Insert, then Close. You can use the same process to add images to AutoCorrect. In this case simply make sure you select both the "Replace as you type" check box and the "Formatted text" option button.

Other options for adding images and text

AutoText is another option for adding larger blocks of text or graphics automatically to a document. The difference with using AutoText is that while you still link the text or image to a series of characters, the replacement doesn't happen unless you specifically request it by pressing the F3 key. AutoText is preferable to AutoCorrect if you want to link text to everyday words because the words are not replaced unless you specifically ask.

If you find it hard to remember "/c" is a cent symbol or the right AutoCorrect combi-

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nation for a degree symbol (°) consider using AutoText, which can be more intuitive. You may find it easier to remember that to get a cent symbol you type "cent" plus F3 or a degree symbol (°) is "degree," plus F3 etc. To create the degree AutoText entry place the degree symbol in your document by holding down the Alt key as you type 0176 on the numeric keypad. Select the symbol and select Insert, AutoText and select New. In the Create AutoText dialog type the word "degree" and click OK. When testing it you'll notice the word "degree" isn't replaced until you press the F3 key.

If you forget an AutoText entry select Insert, AutoText and browse the list to see what entries are available. You can use AutoText for short or long pieces of text, symbols or field codes. You can also add images such as your company logo or an image of your signature, to your document using AutoText. To set up an AutoText entry for your signature, first insert your signature into an open document and select it. Select Insert, AutoText, New and type a Name for your entry and select OK. To add your signature to your document type the AutoText name and press F3.

To remove an AutoText entry select Tools, AutoCorrect, select the AutoText tab, select the entry to remove from the scrollable list and select Delete and then OK.

Deciding between AutoText or AutoCorrect is at times a matter of personal preference. If you use a sensible way of naming your entries, you can use AutoCorrect for most simple replacements. The naming convention WordPerfect uses, in which a name is prefixed with a back slash (i.e. \cent for the cent symbol ¢) makes sense as it allows you to use descriptive names that are easier to remember.

WordPerfect 8

WordPerfect's options for automatically inserting text and images and fixing typos can be accessed by selecting Tools, then QuickCorrect. The dialog box contains tabs for QuickCorrect and QuickWords, which together are equivalent to Word's AutoCorrect.

To add text to QuickWords, type the text and select it, select Tools, QuickWords, type the abbrev[illegible] click OK. The text won't appear in the [illegible] box until it is inserted into the QuickWords list. Images are more difficult to add because you must select the image's code rather than the image itself. To add an image as a QuickWord, insert the image into a document, select View, Reveal Codes and locate and select the code for the image (using Shift and the arrow keys). Select Tools, QuickWords, type the abbreviation and click OK. Choose your abbreviations carefully—following WordPerfect's example and prefixing each abbreviation with the back slash character is a good approach to take.

To control options such as bulleted lists and quick lines select Tools, QuickCorrect and select the Format As-You-Go tab—selecting the SmartQuote tab instead takes you to the smart quotes options.

Lotus Word Pro 97

Word Pro's SmartCorrect option is the equivalent of Word's AutoCorrect. To add or remove SmartCorrect entries select Edit, SmartCorrect and select either Add Entry or Delete Entry. This dialog includes the check box for selecting and deselecting the smart quotes option.

The equivalent to Word's AutoText option is Word Pro's Glossary. To add text or an image to a glossary, first add it to a document, select it and select Edit, then Glossary. If you haven't used the glossary option before you will be prompted to create one, so select Yes. Type a name for your glossary entry and select Create. To use a glossary entry, type the glossary entry name and select Ctrl + K to replace it with the glossary entry.

To remove a glossary entry you must edit the glossary file by selecting File, Open, locate the "lotus\wordpro\" directory, select glossary.gls and select Open. Remove the row of the table that contains the entry that needs to be deleted or edited, then save and close the file. ❑

Next month: we'll look at some more ways to do things faster in your word processor including creating some simple macros.

Helen Bradley is a freelance journalist with extensive experience in the use of computer applications to improve office productivity. She can be contacted at helen@journalist.com

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Logitech enhances QuickCam

*Continued from page **131***

Rounding out the software is a bundle of programs for networking (Microsoft NetMeeting for PCs or Boxtop iVisit and White Pine's CUSeeMe for Macintosh), Web publishing (Ixla WebEasy Lite), editing (Adobe PhotoDeluxe), cataloguing (Digital Arts and Science's ImageAXS) and video email (RealNetworks RealPlayer). Also included is a special QuickCam Desktop Theme.

The QuickCam Pro can capture both motion and still images at up to 640x480 resolution and 30-bit color depth. The standard lens can be manually focused to capture images at a range of six inches, and telephoto and wide-angle lenses are available as an option.

Buying and using tips

Use of the USB version requires a USB-compatible operating system. In other words machines with Windows NT or an older version of Windows 95 will not support the USB QuickCam Pro. Windows NT 5 will have USB support but until its release NT users will have to be content with the parallel version. Users of Windows 95 who have a version that doesn't support USB (but who have the ports on the back of the computer) should consider upgrading to a newer version of Windows 95.

Users planning to use the camera as a Web cam should check with their ISP first, for two reasons.

1. A Webcam can generate a lot of traffic. Take a 20KB file and update it every 60 seconds and you're generating 1 MB of traffic every hour just getting the images to the server. Add a couple people who are watching what you're doing, and the bytes really add up.
2. To minimize traffic many ISPs turn on caching for both outgoing *and* incoming traffic. Even if the camera and software are functioning properly the caching process can discard pictures on the way to the server. Placing uploaded images into a directory named "nocache" can sometimes solve this, but again, it's worth checking with the ISP to see if this could be a problem. ❑

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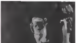

Microsoft co-founder and chairman Bill Gates paid a visit to Toronto in mid-October to meet with corporate partners and clients such as Nortel and to address key Microsoft constituencies, including information technology professionals resellers, developers and our children

In an early morning meeting with about 1,500 industry professionals, Gates gave a state-of-the-industry address in which he outlined his vision of making computing easier and more productive Gates said Microsoft, its strategic partners, and third-party developers, are spending billions of dollars on research with the single goal of making the networked computers of the future simple enough to be useful to everyone.

Microsoft's efforts are driven by customer requests and complaints, Gates said. He reinforced his simplicity theme with a video showing a diabolical Internet repairman foisting complicated, buggy computer solutions on a tech-shocked family

Money for SchoolNet

That afternoon federal Industry Minister John Manley and a group of schoolchildren were joined by Gates to announce Microsoft's financial participation in SchoolNet a program that provides Canadian schools with Internet access

Microsoft will contribute $1 million to SchoolNet's GrassRoots initiative over the next three years GrassRoots provides small grants to help teachers develop and implement online educational projects.

—Jeff Evans

A nearly complete guide to dHTML

Continued from page **148**

examples of how it works in both Internet Explorer and Netscape Navigator The book treats the issue of cross-browser compatibility seriously It gives Web masters the information needed to create a Web site using dHTML that will work in both major browsers.

There are about 300 pages devoted to the HTML 4.0 standard tags. It references where each tags relates in terms of the standard object model and any event-handler attributes it may have Then there are almost 400 pages documenting the minute details of the document object model

There is a thorough section on style sheet attributes, which give full descriptions of use browser compatibility JavaScript equivalents and how it all fits in the standard object model.

The final part deals with sections and contains full descriptions, explores browser compatibilities, and contains the official ECMAScript specifications.

Despite its vast scope and shelf-straining size it does fall short in a couple of places. The introductory section on implementing dHTML is too brief for someone trying to learn it comprehensively and it would benefit from more extensive example codes The emphasis on cross-browser compatibility has its downside too By concentrating on compatibility issues it ignores the strengths associated with each particular browser, just the sort of information that is useful to intranet Web developers

While it won't be the only book Web masters will ever need on dHTML it would be nice if all books on Web-related subjects were nearly as thorough as this. ❑

Note A sample chapter on Cross-Platform Compromises can be found online at http://www.oreilly.com/catalog/dhtmlref/sample_chpt/dhtml_sample.html

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The last, best computer Christmas?

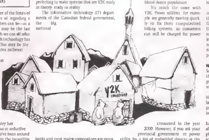
If you've already browsed through the Holiday Gift Guide in this issue, you may have concluded that we at *The Computer Paper* are hopeless technological optimists, blissfully unaware of any aspect of computing that is less than delightful. In fact, we do believe personal computing and that shiny new World Wide Web are, on balance, much more of a good thing than a bad thing. That's why we like to work here.

THE LAST BYTE

JEFF EVANS

However, we are also aware of the limits of technology and the dangers of regarding a tool for learning—as computers can be—as a substitute for wisdom. This may be the last winter for some time in which we can all relax and enjoy the lavish gifts high technology has brought to so many of us. This may be the last, best holiday season of this millennium.

Next year's holiday season will have a giant, increasingly scary shadow hanging over it. At the risk of being a Grinch, I want to share some bad news with you, to think about before the start of the new year.



Pride goeth before the Millennium Bug?

The personal computer industry has never been as vibrant, vigorous or seductive as it is now. Those of use who've been around PCs for a while are stunned by the incredible power of the under $1,500 home PC system. The offerings of the PC industry this holiday season are unprecedented in their richness, relative ease of use and low cost.

Yet, looming over this marvelous picture is a future with a real, yet unknown danger. Since my last piece on the Year 2000 (Y2K) problem—the so-called Millennium bug—I've become a good deal more convinced that it could put a big chill on next year's holiday season. It seems in the last couple of months that the more digging I do, the scarier the picture that emerges.

While the mainstream computer business has potentially big problems related to the Y2K bug, it seems they are manageable. The much bigger problem is all of the other parts of our modern world that use microprocessor technology in embedded forms. Embedded systems are typically circuit boards or even individual chips, and there are billions of them buried in such things as coffee makers, cruise missiles and medical machinery all over the world.

According to recent articles quoting expert opinions in respected publications such as *The Economist*, as many as five percent of the four to five billion embedded microprocessor devices may fail at midnight on New Year's Eve 1999. If those estimates are even approximately correct, then between 120 million and 250 million parts of our vaunted global technological infrastructure are likely to fail all at once, in the middle of winter.

The Canadian share of that crash could be two to four million failing devices. If the breakdowns are limited to Tamagotchi cyberpets and StairMasters exercise equipment, we'll get by without too much pain. If the dead systems include nuclear power plants, natural gas networks, office buildings and communications satellites, we could be in for a disaster of very large proportions.

It's too late?

The date recommended by many experts for having Y2K readiness programs in place is Jan. 1, 1999. That allows for a year of tweaking and perfecting to make systems that are Y2K ready in theory ready in reality.

The information technology (IT) departments of the Canadian federal government, the big national banks and most major corporations are generally well along in their Y2K preparations for PC and mainframe computing systems. The provincial and municipal governments, most medium sized businesses and some small businesses are gearing up their efforts and may be mostly ready in time.

However, in wide ranging conversations since July, none of the "experts" I've talked to in these organizations want anything to do with the embedded systems problem. I'm sure there are some people out there who are working on it, but the embedded systems problem is at least 10 times as big as the "standard" Y2K problem with desktop PCs and mainframe systems, and most organizations haven't even begun to plan how do deal with it. We're already out of time.

Like the blood fiasco, times 1 000

To find an analogy to what's about to happen, we have to look to other times in history when institutions were overwhelmed by something completely unexpected, and outside of their previous experience.

In recent Canadian history, the Red Cross tainted blood scandal is an instructive example. The Canadian Red Cross, a benevolent but stodgy and slow moving institution, was blindsided by the sudden appearance of deadly, initially undetectable viruses in the blood donor population.

It's much the same with Y2K. Power utilities, for example, are generally moving quickly to fix their computerized billing systems so customers can still be charged for power consumed in the year 2000. However, if you ask your provincial government or power utility for a list of embedded devices in the power grid, the number that are not Y2K ready, and when they will be replaced, here are the answers you'll get:

- Everything is under control.
- We'll get back to you.
- We don't know.
- What Y2K problem?

In general, in fundamental power, gas and telecom networks, Y2K preparations are either in their early stages, or have not even been started.

It ain't me, babe

When I start whining about Y2K to coworkers, relatives and passersby in the street, I was amazed at the number of people from all walks of life who look briefly concerned and then say something to the effect of, "Well, Bill Gates is working on something to fix the Year 2000 bug, isn't he?"

So when the chairman of Microsoft was in Toronto for some meetings in October, I asked him if he was involved, or interested in getting involved, in any joint government/industry alliance to tackle the Y2K problem in embedded systems. Gates looked at me for a moment and then, a bit wearily, stated his position. He and Microsoft are very concerned about the Y2K problem as it directly affects the Microsoft products used by Microsoft customers. Microsoft is working very hard to identify and deal with Y2K problems in time to beat the upcoming deadline.

Gates is not about to march into other companies and tell them how to deal with their Y2K issues. In short, given the fact that Gates is being vigorously prosecuted by the U.S. Justice Department and many state governments, and harassed by competitors who include some suppliers of Y2K unready technology, he has little interest, or time, to devote to owning everyone else's Millennium problems.

It's my party and I'll cry if I want to

So here's the deal. In the tainted blood scandal, there was one other big group that declined to get involved in a timely way. That group was us. John and Jane Q. Public.

It was left to the victims of the tainted blood, their poor families and their hungry lawyers, to try to get the Red Cross and various governments to make amends after it was too late.

This time, with the Y2K problem, we've all had plenty of warning. If I am being unduly alarmist about this, I'll abjectly apologize for playing Chicken Little in the February 2000 edition of this column—if there is a column published in January 2000, that is.

In the meantime, I plan to enjoy this holiday season with my family and look forward to playing with all the computer toys I've had to review for this issue. I expect that in 1999 I'm going to be as big a nuisance as I can on the Y2K topic, until I see some reason not to be.

I urge you all to do the same: phone, fax, email and harangue your local member of parliament, your provincial premier and the prime minister until you start getting some answers that make sense. As Tiny Tim said in the Dickens classic *A Christmas Carol*, "God bless us, each and every one." We'll need all the help we can get. ◻

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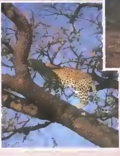

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- PROVIEW 17" SVGA .28dp 1280x1024 Digital Control Energy saving Monitor
- Genuine SOUNDBLASTER AWE64 Sound Card
- Ultra Fast ACER 36X Speed CD-ROM
- High Power Amplified Stereo Speakers
- MOTOROLA 56Kbps V.90 Voice Fax Modem
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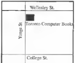

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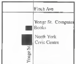

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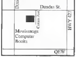

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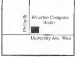

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BOOK BYTES
NEWSLETTER

CANADA COMPUTER BOOKS INC.

November 1998
X-mas Edition

Just a short intro...

Welcome once again to the latest issue of "Book Bytes" ***Canada Computer Books***' quarterly newsletter As winter approaches you will no doubt want to curl up with a favourite book, so why not make it a computer book? As always we are ready to supply you with the latest computer books from the leading publishers in the information technology field

For the programmers and developers this fall has seen the release of exciting new versions of Visual Basic Visual C++ J++ InterDev, and Visual Studio You can count on us to have a complete selection of titles on these books to get you up to speed quickly

For those of us who must struggle along with the thin user documentation that is supplied with most commercial software applications We offer a complete selection of user guides, whether you are an absolute novice looking for straight-forward explanations, or an expert level user who needs detailed information on how to take advantage of the advanced features of programs such as Photoshop Quarkxpress AutoCad or MS Office to name a few We also carry books on lesser-known specialized programs such as 3D Studio MAX, Lightwave 3D and Macromedia Flash 3

In this issue we discuss the growing acceptance of the Linux operating system into the world of mainstream computing No longer the exclusive domain of techies Linux is quickly gaining popularity as an alternative to the Windows operating systems running on today's personal computers This is partly due to the development of easier to-install versions of Linux, as well as the increasing availability of integrated office applications Internet applications graphics programs, etc. Not only do we carry an excellent selection of Linux books, we also have a great selection of various Linux distributions By mid-November we should have not only distributions such as Slackware, Caldera, S u S E, etc but also the latest version of Red Hat, currently the most popular version of Linux among our customers

We have four stores ready to serve you, located in Mississauga North York, Toronto, and Waterloo For real customer service and selection please call us email us or drop by one of our locations Or, visit us on the web at www CanadaComputerBooks com From all of us at ***Canada Computer Books***, have a safe and enjoyable holiday season!

Top 10 List For Canada Computer Books-3rd Q '98

HTML 4 for the World Wide Web Visual Quickstart Guide
Castro, Elizabeth
Peachpit Press, 0-201-69696-7
$24 95

C++ Programming Language, 3rd Edition
Stroustrup Bjarne
Addison Wesley, 0-201-88954-4
$71 50

Oracle PL/SQL Programming
Feuerstein & Pribyl
O Reilly, 1 56592 335 9
$66.95

Quarkxpress 4 for Macintosh Visual Quickstart Guide
Weinmann, Elaine
Peachpit Press, 0-201 69623-1
$26 95

Oracle 8 The Complete Reference
Koch & Loney
Osborn/McGraw Hill, 0-07 882396-X
$78 95

Solaris System Administrator's Guide
Winsor, Janice
Sun 1-57870-040-X
$56.50

Teach Yourself Visual Basic 5 in 21 Days
Gurewich & Gurewich
Sams Publishing, 0-672 30978-5

Teach Yourself Linux in 24 Hours
Ball Bill
Sams Publishing 0-672 31162-3
$35 95

Flash 3! Creative Web Animation
Plant, Darrel
Peachpit Press, 0-201 35368-7
$41 95

Illustrator 7 Macintosh & Windows Visual Quickstart Guide
Weinmann & Lourekas
Peachpit Press, 0-201-69624-X
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This symbol denotes a little tidbit of information that our staff has ferreted out that we think may be of interest to our readers If you have any suggestions for future Infobits, please let us know!

Steve Holzner
John Wiley & Sons, Inc.
ISBN 0471312908
Available now
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Fast Track Visual C++ 6.0 Programming

Leading Visual C++ expert Steve Holzner cuts right to the chase and gives you everything you need to know to develop applications with Visual C++ His vast expertise in programming and his practical learning by doing approach will get you up to speed faster than you ever thought possible Cutting right to the core of issues critical to programmers, this book begins with a brief refresher course and then moves on to the skills that are absolutely vital to all programmers and developers.

Gunter Born
Microsoft Press
ISBN 1-57231-824-4
$57.99

Inside the Microsoft Windows 98 Registry

This book and CD set provides an overview of the registry, a little-understood yet important aspect of any of the 32-bit flavors of windows Concepts and recurring features are explained so developer s can ensure their applications are well behaved.

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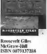
Is a combination of technologies including HTML, scripting and object oriented programming, combined to create individual web pages It's a way of tying HTML, scripting languages and structuring documents together to allow a web designer to quickly spice up his or her web pages



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tions with MSMQ

This book offers an overview of the general design of queued messaging applications and a discussion on how MSMQ can be used in two-tier three-tier Web and component architecture applications. A tutorial shows you how to write MSMQ applications using COM components, Visual Basic, Visual C++, and the MSMQ API. In addition, this book offers a comprehensive introduction to transaction processing and develops a full-scale application using MSMQ that illustrates the technology s potential for this emergent field.

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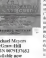

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Kathy Ivens
Que Corporation
ISBN 0789715945
$42.95

Using MS Windows 98

A thorough simple reference for the essential skills With step-by step lessons that make it easy for you to master Windows 98 in order to be productive Que books are known to have some of the best indexes around and this title is no exception.

Professional MTS MSMQ with VB and ASP

This book is designed for developers who are now building, or just starting to build, high performance and reliable web-based applications for a whole range of uses. It will also benefit those who want to learn more about the design and structure principles behind DNA as a whole. It assumes a working knowledge of basic web site construction techniques, HTML, Active Server Pages, and some familiarity with Visual Basic.

Alex Homer &
David Sussman
Wrox Press Inc.
ISBN 1861001460
Available Now
$69 99

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A programmer oriented, problem solving guide that teaches readers how to enhance their Visual Basic skills. Chapters are organized by topic and divided into how-to's. Each how to describes a problem, develops a technique for solving the problem, presents a step-by step solution, furnishes relevant tips, comments and warnings, and presents alternate solutions where applicable.

Eric Brierley &
Anthony Prince
The Waite Group
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Microsoft Active Desktop

No, this doesn't refer to pens and cups of coffee jumping off of your desk! It refers to the Internet Client SDK: a collection of documentation utilities, DLL and application files and code samples created by Microsoft to greater facilitate the new technologies MS has developed for integrating Internet functionality with the Windows desktop.

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Morten S. Nielsen
Coriolis Books
ISBN 1-57610-288-2
$41 99

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This book describes spam - unwanted email messages and inappropriate news articles - and explains what you and your Internet service providers and administrators can do to prevent it, trace it, stop it, and even outlaw it. Contains a wealth of advice, technical tools, and additional technical and community resources.

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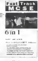

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WHAT'S NEW!

Here Comes Linux!

One of the more popular topics around our stores (and around the computing world) today is the increasing popularity of the Linux operating system. It was first developed in 1991 by a young student, Linus Torvalds, as a smaller but more capable alternative to some of the Unix operating systems then available. In fact, what has contributed to its popularity is that the source code for Linux is freely available to other programmers who can then modify the OS for their own needs. Basically, it allows them to create their own ultimate operating system.

With the free-flow of information allowed by the Internet, developers all over the world can quickly assist one another in developing custom solutions for Linux and respond to problems much more quickly than large companies can. Patches can be available worldwide within hours of a problem cropping up and Linux's feature set is constantly increasing. This also means that Linux is now available for almost any hardware platform that you can name.

While Linux's source code is free, Linux itself is not. People who use Linux in their workplaces usually have one of many commercial distributions that they have paid for. The number of Linux applications is increasing as commercial and freeware programs are ported over to the OS. (as a side note, Corel is releasing Wordperfect for Linux by the time you read this and supposedly it is free!) Users can download the various Linux distributions, purchase the software in packages, or purchase books that have the software on CD-ROM.

Linux is a versatile operating system. It can be used by everyone from home users to large corporations for everything from web surfing to database manipulation. Its hardware requirements are very modest so that the x86 distributions can run very well on older 486 systems.

But Linux is also not for the computer newbie. Depending on the Linux distribution, installation can be problematic with various hardware incompatibilities cropping up. Some Linux distributions are more user friendly than others and tech support is supplied in some cases. Over time, expect a Linux installation to be as easy as any other OS installation as incompatibilities are worked out.

Here are several resources for more information on up-and-coming Linux,

Running Linux 2nd Edition
Matt Welsh & Lar Kaufman
O Reilly & Associates
ISBN 1-56592-151-8
$42.95

Teach Yourself Linux in 24 Hours
Bill Ball
Sams Publishing
ISBN 0-672 31162-3
$35.95

Linux for Dummies
Witherspoon, Witherspoon & Hall
IDG Books
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http://www.KenandTed.com/kensbookmark/linux/index.html

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